| State of a | Marronali                | 2               |               |                      |                      |             |                          |                   | SOI               | L B          | ORIN      | G L                     | DG I     | NFO         | RMA             | TIO   | N             |
|------------|--------------------------|-----------------|---------------|----------------------|----------------------|-------------|--------------------------|-------------------|-------------------|--------------|-----------|-------------------------|----------|-------------|-----------------|-------|---------------|
| Departm    | ent of Na                | bural F         | -<br>Tesource |                      | te To:<br>olid Waste |             | z, Waste                 | Tank              |                   | Form         | 4400-1    | 22                      |          |             |                 |       | 7-91          |
|            |                          |                 |               | _                    | lastewater           |             | derground<br>ster Resoun |                   | •                 |              |           |                         |          |             | 4               |       | 4             |
|            |                          |                 |               |                      | mergency Response    |             | her                      |                   |                   |              |           |                         |          | Page        |                 | of _  |               |
| Facility / | Project 1                | Jame            |               |                      |                      |             | License/P                | ermit/l           | Monitor           | ing N        | mber      |                         |          | Numb        |                 |       |               |
| MA         | DISO                     | N-K             | IPP CO        | ORP Waube            | easa Street          |             |                          |                   |                   |              |           | ]                       |          | <b>vv-2</b> |                 |       |               |
| Boring [   | willed By                | (Firm           | name i        | and name of crew     | chief)               |             | Date Drill               |                   |                   |              |           | rilling C               |          |             | Drilling<br>HS/ |       | ∞d<br>5" ID   |
| Rac        | iner St                  | ate             | Drillin       | 9                    |                      |             | 07<br>MM                 | / 31<br>DD        | ~\_\_\_\_\_\_\_\_ | 5            | 07<br>M M | / <u>31</u>             | - / 🔻    | 95          | 1101            | 8.2   | 5 OD          |
| Kev        | in Mc                    | Cun             | nder          | rique Well No,       | Cammon Well          | Name        | Final Stat               | ic Wet            | or Leve           | 1            |           | e Bevat                 |          |             |                 |       | meter         |
|            | **                       |                 |               |                      | MW-2A                |             | 839                      | .90 <sub>Fe</sub> | et MSL            |              | 865       | .54                     | eet M    | SL          | 8               | 3.3   | nches         |
|            |                          | 0               |               |                      |                      |             |                          |                   |                   |              | Local     | Grid Loc                |          |             | icable)         |       |               |
| State Pla  | ocation<br>ina           |                 |               | N                    |                      | E S/C/      | V Lat                    | _                 |                   |              |           |                         |          | N           |                 |       | □ E           |
| NE         | 1/4 of                   | SW              | 1/4 01        | Section 5            | T _7 N,R             | 10 E        | Long                     | _                 |                   |              | <u></u>   | Fee                     |          | s           |                 | Feet  | D W           |
| County     |                          |                 |               |                      | -                    | 1           | County C                 | ode               |                   |              | City/ or  |                         |          |             |                 |       |               |
| DAI        | NE                       |                 |               |                      |                      |             | 3                        |                   | u                 | IYC          | FMA       | DISC                    |          |             |                 |       |               |
| Sam        | ple .                    |                 |               |                      |                      |             |                          |                   |                   |              |           |                         | Soil Pr  | perties     |                 |       |               |
|            | 3                        | Z               |               |                      | il/Rock Desc         | rintion     |                          |                   |                   | F            |           | _                       |          |             |                 |       | ROD/ Comments |
|            | B                        | 1               | Feet          |                      | I Geologic Or        |             |                          |                   | 3                 | agra         |           | atjour u                | 2 =      |             | _               |       | S             |
| Number     | Length<br>Recovered (in) | Blow Counts (N) | Depth in Feet | Ano                  | Each Major U         |             |                          | uscs              | Graphic Log       | Well Diagram | PID/FID   | Standard<br>Penetration | Moieture | Liquid      | Plestic         | P 200 | /QD           |
| 5          | 3.2                      | 윮               | 8             |                      | Cacit Iviajor C      | JINE        |                          | 5                 | Ö                 | 3            | -         | 0.6                     | 20       | 123         |                 | -     | -             |
| 15         |                          |                 | E             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      | MW-2 for stra        | tigraphi    | С                        |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | =             | information          | ٦.                   |             |                          |                   |                   | -            |           |                         |          |             | 1               |       |               |
|            |                          |                 |               |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | =             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      | -                    |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 |               | 4                    |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | =             |                      |                      |             |                          | 1                 |                   |              | ļ         |                         |          |             | -               |       |               |
|            |                          |                 |               | 1                    | 840 0                |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 |               |                      |                      |             | 9.                       |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          | - 2             | E             |                      |                      |             |                          |                   |                   |              | -         |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      |                      |             |                          |                   |                   |              |           |                         |          | 1           |                 |       |               |
|            |                          |                 |               |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | L             |                      |                      |             |                          |                   |                   | g            |           |                         |          | 1           |                 |       |               |
|            |                          | 1               | F             | 1                    |                      |             |                          |                   |                   |              |           |                         | 1        |             | 5. W            |       |               |
|            |                          |                 | =             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 |               |                      |                      |             |                          | ŀ                 |                   |              | 1         |                         |          |             | İ               |       | 1             |
|            |                          |                 | E             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            | 1.                       |                 |               |                      |                      |             |                          |                   |                   |              | 1         |                         |          |             |                 |       |               |
|            |                          |                 |               |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 |               |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | F             |                      |                      |             |                          |                   |                   |              |           |                         | 1        |             |                 |       |               |
|            |                          |                 | F             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          | 1               | F             |                      |                      |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | E             |                      | 000:                 |             |                          |                   |                   |              |           |                         |          |             |                 |       |               |
|            |                          |                 | 3             |                      | @ 30 feet.           |             |                          | das               |                   |              |           |                         |          |             |                 |       |               |
|            | -                        | net the         | e informa     | tion on this form is | true and correct to  | the best of | my knowle                | dge.              | m                 | Dan          | nes ar    | od Mo                   | ore.     | Madi        | son. \          | ΝI    |               |
| Signat     | ure (                    |                 |               | 1) 4                 | -10.00               |             |                          | 1.,               |                   | الهر         | ال جيء    | IN INIO                 | 100      | A LOUGH     |                 |       |               |

This form is authorized by Chapters 144.147 and 162, Wis, Stats, Completion of this report is mandatory, Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to so 144.99 and 162.06, Wis, Stats

| State of Departm     |                         |                      | lecource:          | Route To  |                                 | z. Wasta<br>idenground | Tank:              |         |                     | ORIN<br>4400-1 | IG L                                    | OG I                    | NFO            | RMA     | ATIO     | ON<br>7-91 |               |
|----------------------|-------------------------|----------------------|--------------------|---|---------------------------------|------------------------|--------------------|---------|---------------------|----------------|---|-------------------------|----------------|---------|----------|------------|---------------|
|                      |                         |                      |                    | □ Waster  | water                           |                        | ster Resour        |         |                     |                |   |                         |                | Page    | 1        | of         | 2             |
|                      |                         |                      |                    | O Emerg   | ency Response                   | □ Ot                   | License/F          | 201     | Manita              | ina N          | umber                                   |                         | Borina         |         |          |            |               |
| Facility /           | Project I               | Varne                | IDD 0/             | ORP Waubeas   | a Ctroat                        |                        | Dogrady            | CHING   | AIDINIO             | nig re         | UI II I I I I I I I I I I I I I I I I I |                         |                | /NV-2   |          |            |               |
|                      |                         |                      |                    |   |                                 |                        | Date Dril          | ing Str |                     |                | Date D                                  | ritling C               |                |         | Drilling | Meti       | nod           |
| Boring [             | oritied By<br>Iger St   | (Firm                | name e<br>Drilline | nd name of craw chie                                      | rt)                             |                        | 07                 | / 31    |                     | 5              | 07                                      |                         |                | 95      |          | 4.1        | 25" ID        |
| Kev                  | in Mc                   | Cun                  | nber               |   |                                 |                        | MM                 | DD      |                     |                | MM                                      | DD                      | <u> </u>       | Ÿ       | Darah    |            | 25 OD         |
| 2 - 4 - St 102 O-102 |                         | ALC: No little       | MU                 | rique Well No.  | Common Well Na<br>IMW-2         | ime                    | Final State<br>839 | 55 Wal  | er Level<br>set MSL |                |   | 5.55                    | ion<br>Feet MS | st.     |          |            | inches        |
| Boring I             | ocation                 |                      | 10 11 and          |   |                                 |                        |                    |         |                     |                | Local                                   | Grid Loc                |                |         | icable)  |            |               |
| State Pla            |                         | <b>**</b>            |                    | N   | 7 1                             | E S/C/N                |                    |         |                     | _              | Ì                                       | _                       |                | N       |          | _          | DE            |
| NE                   | 1/4 of                  | SW                   | 1/4 of             | Section 5 T   | 7 N,R 1                         | 0 E                    | Long               |         | OL 117              |                | 2'24'                                   | Fee                     |                | 5       |          | _ Feet     |               |
| County               |                         |                      |                    |   |                                 | DNR<br>1               | County C           | ode     |                     |                |   | Village                 |                |         |          |            |               |
| DAI                  | NE                      |                      |                    |   |                                 |                        |                    |         | U                   | 110            | יר ועוף                                 | שושו                    |                |         |          |            |               |
| Serre                | do                      |                      |                    |   |                                 |                        |                    |         |                     |                |   |                         | Soll Pro       | pertier | ·        |            | ١,            |
|                      | 3                       | 2                    | _                  | Sail/R  | ock Descrip                     | ntion                  |                    |         |                     | ٤              |   | _                       |                |         |          |            | ROD/ Comments |
| 1                    | 9                       | 8                    | 8                  |   | ologic Origi                    |                        |                    |         | 3                   | ag Ta          |   | E E                     | 8 =            | _       | .        |            | 1 8           |
| Number               | Length<br>Recovered (m) | Now Counts (N)       | Depth in Feet      |   | ch Major Un                     |                        |                    | USCS    | Graphic Log         | Well Diagram   | PID/FID                                 | Standard<br>Penetration | Moisture       | Liquid  | Pleetic  | P 200      | ) a           |
| ž                    | 32                      | ĸ                    | å                  |   | 511 1110jOt 011                 |                        |                    | ñ       | Ø                   | <u> </u>       |   | ωE                      | 20             |         | 2.3      | -          |               |
| 1                    | 23                      | 23 20 22 23          | 15                 | SAND, fine gravel, slightly graded, brown - gravel is ang | ained, little si<br>moist, dens |                        |                    | SM      |                     |                |   | 42                      |                |         |          |            |               |
| 2                    | 18                      | 19<br>40<br>33<br>38 | E 20               | gravel, moist,<br>brown<br>- angular frag                 | dense, poor                     | rly gra                | nded,              |         |                     |                |   | 73                      |                |         |          |            |               |
| _                    |                         |                      | =                  | SAND, fine g<br>gravel, wet, v                            | raineo, some<br>/ery loose, p   | oorly i                | graded,            |         |                     | =              |   | 100                     |                |         |          |            |               |
| 3                    | 6                       | 50/6                 |                    | brown   |                                 | _                      |                    |         |                     | £              |   | 1.00                    |                |         |          |            |               |
| Signature            |                         | at the               | informati          | on on this form is true a                                 | rip correct to the I            | DOSK OT IT             | IT IS IS WIEL      | Firm    | n [                 | Dam            | es an                                   | d Mod                   | ore. N         | ladis   | on, V    | VI         |               |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offeres, pursuant to ss 144.99 and 162.06, Wis. Stats

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT 7-91

|        |              |                 | /W-2          | Use only as an attachment to Form 440   | 1-122. |             |              |         |          |                     | Page           | 2               | of _  | 2_            |
|--------|--------------|-----------------|---------------|---|--------|-------------|--------------|---------|----------|---------------------|----------------|-----------------|-------|---------------|
|        | Number       |                 | /104-2        | Use only as an anactata of our way  |        |             |              |         |          | Soil Pr             |                |                 |       |               |
| Number | Length et al | Blow Counts (N) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs   | Graphic Log | Well Diagram | PID/FID | Standard | Mointure<br>Confent | Liquid<br>Umit | Plastic<br>Umit | P 200 | ROD/ Comments |
| 4      | 5            | 50/5            |               | Split spoon refusal @ 34 feet. Bedrock  OUARTZ ARENITE, fine grained, friable, white to light tan.  - no samples collected below 34 feet.  T.D. hole @ 44.5 feet. Set MW-2 @ 44 feet. |        |             |              |         |          |                     |                | 3               |       |               |

| State of, V          | Vieconsin                | ŀ               |                |            | Dou          | ute To:  |         |           | <b>13</b> u | sz. Wasta              |                    | SOI                                    |              |           | IG L                    | OG II    | NFO        | RM/      | ATI                 | ON<br>7-91    |
|----------------------|--------------------------|-----------------|----------------|------------|--------------|--|---------|-----------|-------------|------------------------|--------------------|--|--------------|-----------|-------------------------|----------|------------|----------|---------------------|---------------|
| Departme             | est of Nat               | ural Re         | <b>SOLITOB</b> | 8          |              | solid W  |         |           |             | az, yvaste<br>ndemnoun | d Tanki            |  | Form         | 4400-1    | 122                     |          |            |          |                     | /-91          |
|                      |                          |                 |                |            | _            | <b>Vastev</b>  |         |           |             | ater Resou             |                    |  |              |           |                         |          | D          | 1        | of                  | 2             |
|                      |                          |                 |                |            | 06           | Emerge   | ncy Re  | eponea    | D,0         | ther                   |                    |  |              |           |                         |          | Page       |          | . "                 | <u> </u>      |
| Facility /           | Project N                | arné            |                |            | <del>-</del> |  |         |           |             | License                | Permit/i           | Monito                                 | ring N       | umber     |                         | Boring   |            |          |                     |               |
| MA                   | DISO                     | N-KII           | PP C           | ORP        | Waub         | easa   | Stre    | eet       |             |                        |                    |  |              |           |                         |          | <b>M-3</b> |          |                     |               |
|                      |                          |                 |                | eman bne   |              |  |         |           |             | Date Dr                |                    |  |              |           | Orilling C              |          |            | Drilling | , Met<br>Δ <i>A</i> | hod<br>25" ID |
| Bad                  | oer Sta                  | ate [           | )rillin        | g          |              |  |         |           |             | 08                     | <u>/ 01</u>        |  | 15           | 80<br>M M | <u>/ 01</u>             | - / 등    | 95         | 1 13     |                     | 25 OD         |
| Kev                  | in Mc(                   | Cum             | ber            |            | 40.7         | Charles II   | ~       | non Well  | Nama        | M.M.                   | DD<br>tic Wat      | er Leve                                |              |           | e Eleva                 |          |            | Borel    | ole D               | iameter       |
|                      |                          | No.             | WIL            | rigus We   | NO.          |  |         | W-3       | 170110      |                        | 3.38 <sub>Fe</sub> |  |              |           | 7.20                    | Feet MS  | 1          |          | 8.3                 | inches        |
|                      | o in 199                 |                 |                |            |              | a de la composição de l |         |           |             |                        |                    | er M2                                  |              | Local     | Grid Loc                |          |            |          |                     |               |
| Boring L<br>State Re |                          |                 |                |            | N.           |  |         |           | E S/C       | N Lat                  | _                  |  | _            |           |                         |          | N          |          |                     | DE            |
|                      |                          | SW              | 1/4 of         | Section    | 5            | T  | 7       | N, R      | 10 E        | Lon                    |                    |  | _            | l         | Fe                      | et 🗆     | s          |          | _ Fee               | t D W         |
|                      | 1/4 01                   |                 | 174 01         | 300001     |              |  |         |           | DN          | R County               | code               | Civil                                  | Town/        | City/ o   | Village                 | )        |            |          |                     |               |
| County               | IE.                      |                 |                |            |              |  |         |           |             | 1 3                    |                    | CI                                     | TY C         | F MA      | ADISC                   | N        |            |          |                     |               |
| DAI                  | <u> </u>                 |                 |                |            |              |  |         |           |             |                        |                    |  |              | Т         |                         | Soil Pro | partie     |          |                     |               |
| Semp                 |                          |                 |                |            |              |  |         |           |             |                        |                    |  |              |           |                         |          |            |          |                     | T g           |
| - }                  | Length<br>Recovered (in) | Blow Counts (N) | 16             |            | Sc           | oil/Ro   | ock [   | Desci     | ription     |                        |                    | 2                                      | Ę            |           | =                       |          |            |          |                     | ROD/ Comments |
|                      | - B                      | 5               | n Fe           |            |              |  |         |           | igin Fo     | r                      |                    | 5                                      | i i          | 9         | 문항                      | ent e    | -          | ,        |                     | Į             |
| Number               | ook a                    | 3               | Depth in Feet  |            |              |  | -       | ajor U    |             |                        | USCS               | Graphic Log                            | Well Diagram | PID/FID   | Standard<br>Penetration | Moisture | Liquid     | Plaetic  | P 200               | 9             |
| 킬                    | 34                       | 15              | ۵              |            |              |  |         |           |             |                        | 13                 | "                                      | -            | -         |                         |          | 1          | -        |                     |               |
|                      |                          |                 | _              |            |              |  |         |           |             |                        |                    |  |              |           |                         |          |            |          |                     |               |
|                      |                          |                 | _              | Blind      | drille       | d to   | 18 fe   | et.       |             |                        |                    | 1                                      |              |           |                         | 1        |            |          |                     | -             |
|                      |                          | ŀ               | _              |            |              |  |         |           |             |                        | 1                  |  |              |           | 1                       |          |            |          |                     | -             |
|                      |                          |                 | _              |            |              |  |         |           |             |                        |                    |  |              |           |                         |          |            |          |                     |               |
|                      |                          | ļ               | 15             |            |              |  |         |           |             |                        | 1                  |  |              |           |                         | -        | 1          |          |                     |               |
|                      |                          |                 | =              |            |              |  |         | •         |             |                        |                    |  |              |           |                         |          |            |          | -                   |               |
|                      |                          |                 | _              | }          |              |  |         |           |             |                        | İ                  |  |              |           | 1                       |          |            |          | 1                   |               |
|                      |                          |                 | 16             |            |              |  |         |           |             |                        |                    | 1                                      |              |           |                         |          |            |          |                     |               |
|                      |                          |                 | _              |            |              |  | . 12    |           |             |                        |                    |  |              |           |                         |          | 1          |          |                     |               |
|                      |                          |                 | 17             | 1          |              | -  |         | ٠         |             |                        |                    |  |              |           |                         |          |            |          |                     |               |
|                      | İ                        | _               | E              |            |              |  |         |           |             |                        |                    |  |              | 1         |                         | 1        |            |          |                     |               |
|                      |                          | 27<br>34        | E 18           |            |              |  |         |           |             |                        |                    | 10000                                  |              |           | 74                      |          |            |          |                     |               |
| 1                    | 18                       | 40<br>50/5      | E"             | SA         | ND. fi       | ne ar  | aineo   | d, son    | ne silt,    | trace                  | SM                 |  |              | 1         | 1 / -                   |          |            |          |                     |               |
|                      |                          | 50/5            | E              | ora        | vel. v       | erv d  | ense    | dry,      | poorly      | grade                  | ١,                 |  | Ē            |           |                         |          |            | *        |                     |               |
|                      |                          |                 | 19             |            | nown         |  |         |           |             |                        |                    | ************************************** |              |           |                         | 1        | 1          |          |                     |               |
|                      |                          |                 | E              | - ar       | ngular       | fragi  | ment    | ts of     | stands      | tone.                  |                    |  |              |           |                         |          |            |          |                     |               |
|                      |                          | 41              |                |            |              |  |         |           |             |                        |                    | 10 m                                   |              |           | 86                      | .        |            |          |                     |               |
| 2                    | 23                       | 45<br>50/5      | _              |            |              |  |         |           |             |                        |                    | TO THE                                 |              |           |                         |          | 1          |          |                     | - 1           |
|                      |                          | 50/5            | E              |            |              |  |         |           |             |                        |                    | 5 88                                   |              |           | Ì                       |          |            |          |                     |               |
|                      |                          |                 | 21             | 1          |              |  |         |           |             |                        |                    | ÷ =                                    |              |           |                         |          |            | -        |                     |               |
|                      | 1                        |                 |                | `          |              |  |         |           |             |                        |                    |  |              |           |                         |          |            |          |                     | 1             |
| _                    |                          | 39              | L 2            | Slic       | ahtly n      | noist.   |         |           |             |                        |                    |  |              | 1         | 12                      | 2        |            |          |                     | -             |
| 3                    | 9                        | 50/3            |                |            |              |  |         |           |             |                        |                    | \$ = =                                 | +==          | 1         |                         |          |            |          |                     | ŀ             |
|                      |                          |                 |                |            |              |  |         |           |             |                        |                    |  |              |           |                         |          | 1          |          |                     |               |
|                      | 1                        |                 | -2             | 3          |              |  |         |           |             |                        |                    | į                                      |              |           |                         |          |            |          |                     |               |
|                      |                          |                 | F              |            |              |  |         |           |             |                        |                    | 1                                      |              |           |                         |          |            |          | ļ                   |               |
| 4                    | 9                        | 48              | 上2             | Mo         | oist.        |  |         |           | (4)         |                        |                    |  | 產            |           | 12                      | 3        |            |          |                     |               |
| ·                    |                          | 50/4            | F              |            |              |  |         |           |             |                        |                    |  |              | 1         |                         |          |            |          |                     |               |
|                      |                          | 1               | F              |            |              |  |         |           |             |                        |                    | 100                                    |              |           |                         |          |            |          |                     |               |
| ! hereby             | certify th               | at the          | informa        | tion on th | is form i    | s true a   | and ogn | rect to 1 | the best o  | my know                | edga.              |  |              |           |                         |          | - 40       |          |                     |               |

Signature

This form is authorized by Chapters 144.147 and 162, Wis. State. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to as 144.99 and 162.06, Wis. State

State of Wisconsin

SOIL BORING LOG INFORMATION SUPPLEMENT 7-91

| Depart | ment of l                | Vatural                | Resources     | Foun 44   |        |             |  |           |                         |                     | _               | 2 | _ of _ | 2             |
|--------|--------------------------|------------------------|---------------|---|--------|-------------|--|-----------|-------------------------|---------------------|-----------------|---|--------|---------------|
| Boring | Number                   | N                      | M-3           | Use only as an attachment to Form 440   | 0-122. |             |  |           |                         | Soil Pro            | Page<br>opertie |   | _ of _ | _             |
| Number | Length<br>Recovered (in) | Blow Counts (N)        | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS   | Graphic Log | Well Diagram   | , PID/FID | Standard<br>Penetration | Moieture<br>Content |                 |   | P 200  | RQD/ Comments |
| 4      | 5                        | 27<br>40<br>45<br>50/5 | 23<br>23<br>  | @ 26 - 27.2: GRAVEL, little sand, trace silt, wet, very dense, poorly graded, lt. brown.  @ 27.2: SAND, fine grained, some silt, wet, poorly graded, very dense, tan. | GM     |             | CONTRACTOR AND CONTRA |           | 85                      |                     |                 |   |        |               |
|        |                          |                        | 8             | T.D. hole @ 29.5 feet. Set well at 28.5 feet.   |        |             |  |           |                         |                     |                 |   |        |               |

|        | te of Wi                |                 | n<br>itural Resc |  | oute To:       |                  |         |                    |             |              |               | BOR                     |                     | .O <b>G</b> ! | NFOF             | RMAT     | rion         | 7-91 |
|--------|-------------------------|-----------------|------------------|--|----------------|------------------|---------|--------------------|-------------|--------------|---------------|-------------------------|---------------------|---------------|------------------|----------|--------------|------|
|        |                         |                 |                  |  | Solid Waste    |                  | □ Hai   |                    |             |              |               |                         |                     |               |                  |          |              | 7-31 |
|        |                         |                 |                  |  | Wastewater     |                  |         | dergrou<br>ter Res |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 |                  | 0  | Emergency R    | Response         | □ Oth   |                    |             |              |               |                         |                     | F             | Page             | 1_ of _  | 3            |      |
|        | ility / Pr              |                 |                  |  |                |                  | Lic     | ense/P             | ermit/l     | Monitor      | ing Num       | ber                     | Т                   | -             | Number           |          |              |      |
|        | ladiso                  |                 |                  | ne and name of crew  | chief)         |                  | Date    | Drilling           | Starte      |              | l Da          | le Drilling             | -                   | MW<br>etect   | /-3D             | lling Me | thort        |      |
|        |                         |                 |                  | gDave Cruise   |                |                  | 4       | L 1_               |             |              |               | 07 /                    |                     | , <u>99</u>   | - 1              | 1/4"     |              | C A  |
| DNE    | ( Facilit               | ki Wali         | No.              | VI Unique Well No.   | Common W       | eli Name         | MN      | Static             | D .         | YY           | $\rightarrow$ | M M<br>ace Elev         | D D                 | YY            |                  | ehole C  | _            |      |
|        | 507                     |                 | A RESIDENCE   17 |  | MW-3D          |                  | 1       |                    | Feet M      |              |               | ace Elev                | _ Feet              | MSL           | BOI              | 8.3      |              |      |
|        | ng Loca<br>e Plane      |                 |                  | N.   | ES             | S/C/N            | ı Li    | et _               |             | _            | Loc           | al Grid L               |                     |               | cable)           |          |              |      |
|        |                         |                 | W 1/4 of         | Section 5  |                |                  | Lon     | 9 —                |             | _            | 1_            | Fe                      |                     | N<br>S        |                  | Fe       |              | D E  |
| Cour   | nty                     |                 |                  |  |                | DNR Count        | y Code  |                    | Civil T     | own / (      | City / or \   | /illage                 | <u> </u>            |               |                  |          |              |      |
|        | Dane                    | :               |                  |  |                | 1                | 3       |                    | Cit         | ty of        | Madis         | on<br>———               |                     |               |                  |          |              |      |
| Sam    |                         | 2               |                  |  |                |                  |         |                    |             |              |               |                         | Soil P              | ropertie      | s                |          | nts          |      |
| ë      | pe (                    | unts            | Feet             |  | ck Descri      |                  |         |                    | Log         | agran        |               | Fig.                    | e                   | ı             |                  |          | E E          |      |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet    |  | logic Orig     |                  |         | nscs               | Graphic Log | Well Diagram | PID/FID       | Standard<br>Penetration | Moisture<br>Content | Limit         | Plastic<br>Limit | P 200    | ROD/Comments |      |
|        | <u> </u>                | ä               | Dea              | Eaci   | h Major U      | nit              |         | ñ                  | ō           | 3            | <u> </u>      | S S                     | ≊້ ວິ               | 35            | 문년               | <u>-</u> | 8            |      |
|        |                         |                 | E                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        | ,                       |                 | - 1              | CLAY, little s   | ilt, trace sar | nd, low plas     | ticity. |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | _ 2              | slightly moist,  |                | *                | ,       |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | - ~              |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        | - 1                     |                 | <u> </u> - ₃     |  |                |                  |         |                    |             |              |               |                         | ŀ                   |               |                  |          |              |      |
|        |                         |                 | E                |  |                |                  |         | CL                 |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | 4                |  |                | 10               |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | -                |  |                | '                |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | _ 5<br>_         |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | <u> </u>         |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | -                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | 7                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | _                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | B                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | 9                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | -                | SAND, some   | silt trace cl  | lav fine-ora     | ined    |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | 10               | sand, dry, ligh  |                | uy, mic-gra      | inica   |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | <u> </u>         |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | 11  <br>         |  |                |                  | İ       |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | _<br>12          |  |                |                  | i       | SM                 |             |              | !             |                         |                     |               |                  |          |              |      |
|        |                         |                 | _                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | <del>-</del> 13  |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
|        |                         |                 | _                |  |                |                  |         |                    |             |              |               |                         |                     |               |                  |          |              |      |
| heret  | w certif                | fu that t       | 14               | ation on this form is t  | nie and ener-  | d to the best of | mu les  |                    |             |              |               |                         |                     | <u> </u>      |                  |          |              |      |
| Signat |                         | 1/2             | .,               | Later to the state of the state |                | i to the best of | my knov | viedge.            | _           | 0.01         |               |                         |                     |               |                  |          |              |      |

This form is authorized by Chapters 144,147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144,99 and 162,06, Wis. Stats

Dames & Moore, Madison, WI

## SOIL BORING LOG INFORMATION SUPPLEMENT

|                  |               |                 | MW-           |   | Form | 4400        | -122/        | Ä       |                         |                     |                           |     |       | 7-91         |
|------------------|---------------|-----------------|---------------|---|------|-------------|--------------|---------|-------------------------|---------------------|---------------------------|-----|-------|--------------|
| Boring<br>Sample | _             |                 | IVIVV         | 1   | Г    | _           | _            | 1       |                         |                     |                           | age | 2_of  |              |
| Number           | Recovered (N) | Blow Counts (N) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid<br>Pindit<br>Limit |     | P 200 | ROD/Comments |
|                  |               |                 | 15            | SAND, some silt, trace clay, fine-grained sand, dry, light brown.   | SM   |             |              |         |                         |                     |                           |     |       |              |

## SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

| Boring Nu                         | mher            | MW-           |   | Form | 4400        | -122/        | 4       |                         |                     |                |     |        | 7-91         |
|-----------------------------------|-----------------|---------------|---|------|-------------|--------------|---------|-------------------------|---------------------|----------------|-----|--------|--------------|
| Sample                            | _               |               |   | 7    | Т           |              | T       |                         | 0.70                |                | age | 3_ of_ |              |
| Number<br>Length<br>Recovered (A) | Blow Counts (N) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | nscs | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Limit<br>Limit |     | P 200  | ROD/Comments |
|                                   |                 | - 50          | EOB @ 55 ft. Well set @ 53.8 ft.                                    |      |             |              |         |                         |                     |                |     |        |              |

| De                    | pertme                  | Viscons<br>int of N | m<br>atural Red  | Route To:  Solid Waste Wastewater   |                               | □ Ha   | dergro  | und Ta      | anks              | SO      | L BOR<br>Form 44        | <b>LING</b>  <br> 100-122 | LOG           | INFO             | RMA'       | Tioi         | 7-91  |
|-----------------------|-------------------------|---------------------|--|---|-------------------------------|--------|---------|-------------|-------------------|---------|-------------------------|---------------------------|---------------|------------------|------------|--------------|-------|
| Fac                   | cility / P              | miect I             | lama   | ☐ Emergency F   | tesponse                      | CI OII |         |             |                   | -       |                         |                           |               | Page _           | 1_of       | . 1          |       |
| N                     | <b>fadis</b>            | on Ki               | OD   | (8  |                               | Lie    | ense/   | Permit/     | Monitor           | ing Nu  | mber                    |                           | Boring        | Numbe            | ſ          |              |       |
|                       |                         |                     |  | me and name of crew chief)  |                               | Date   | Drillin | g Start     | ed                | 0       | ate Drillin             | g Comp                    | MV<br>leted   | V-3D2            | rilling Me | Mod          |       |
| of the latest species | The same of the         |                     |  | g-Kevin McCumber  |                               | O.     | 4 /-    | 02          | / <u>-01</u>      |         | 04                      | 02                        | 01            | - 1              | 5 1/4"     |              | TC: A |
| F231                  | 种类的                     | i na                | Simon 18   | Common W  | ell Name                      |        |         | Water       |                   | Su      | M M<br>rface Elec       | D D                       | YY            |                  | rehole (   |              |       |
|                       | ing Loc                 |                     | 21. Can  | MW-3D   |                               |        |         | Feet N      | ASL               | 1-      |                         |                           | MSL           |                  | 10         | inc          |       |
|                       | e Plan                  |                     |  | NES   |                               | 1 6    | at —    |             | _                 | Lo      | cal Grid L              |                           | (If Appl<br>N | icable)          |            |              |       |
| Cou                   | W 1/4<br>nty            | of S                | W 1/4 of   | Section 5 T 7 N, F  | 10 E                          | Lon    | g       |             |                   |         |                         |                           | 3 S           |                  | Fe         | et           | O E   |
|                       | Dane                    | >                   |  |   | DNR County                    | Gode 3 |         |             | fown/C<br>ty of I |         | Village                 |                           |               |                  |            | 7            |       |
| Sam                   | ple                     |                     | T  |   |                               |        |         | T           | ty of I           | Madi    | son                     |                           |               |                  |            |              |       |
|                       | 3                       | 育                   | ¥  | Calling   |                               |        |         |             | E                 |         |                         | Soil P                    | ropertie      | 8                |            | 퉏            |       |
| Number                | Langer<br>Recovered (N) | Blow Counts (N)     | Depth in Feet  | Soil/Rock Descri<br>And Geologic Orig<br>Each Major U   | jin For                       | •      | USCS    | Graphic Log | Well Diagram      | PID/FID | Standard<br>Penetration | Moisture<br>Content       | Liquid        | Plastic<br>Limit | P 200      | ROD/Comments |       |
|                       |                         |                     | 3<br>- 4<br>- 5<br>- 6<br>- 7<br>- 8<br>- 10<br>- 11<br>- 12<br>- 13 | Blind drilled, no samplin to 33.0 ft., switched to a Bedrock encountered at (sandstone)  EOB @ 82.0 ft., well set | ir rotary 23.0 ft, @ 81.0 ft. |        |         |             |                   |         |                         |                           |               |                  |            | 2            |       |
| Signatu               | re ceruity              | may th              | e intorma  | tion on this form is true and correct i   |                               |        | edge.   |             |                   |         |                         |                           |               |                  |            |              |       |
|                       | . 1                     | 1                   | ~/~  | IMILA   | l F                           | im     | 110     | 900         |                   | 1       |                         |                           |               |                  |            |              | -     |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for separate offense, pursuant to as 144.99 and 162.06, Wis. Stats

State of Wisconsin
Department of Natural Resources

## SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Department of Natural Resources Rev. 7-98 Route To: Watershed/Wastewater Waste Management Remediation/Redevelopment X Other Page 1 of 51 Facility/Project Name License/Permit/Monitoring Number **Boring Number Madison-Kipp Corporation** MW-3D3 Boring Drilled By: Date Drilling Started Date Drilling Completed Drilling Method First Name: Todd Last Name: Schmelfeldt 06/06/2012 06/28/2012 Mud Rotary **Boart Longyear** WI Unique Well No. DNR Well ID No. Well Name Final Static Water Level Surface Elevation Borehole Diameter **MW-3D3** 841.97Feet MSL 867.61 Feet MSL 8" to 35' & 6" to 234' Local Grid Origin x (estimated: ) or Boring Location Local Grid Location Ε State Plane 400120.19 N 2144064.54 E Lat N NW1/4 SW1/4 of Section 5 , T 7 N, R 10 Feet Long Feet Facility ID County County Code Civil Town/City/or Village Madison 113125320 13 Dane Soil Properties Sample એ <u>(I</u> Feet Well Diagram Blow Counts Graphic Log Compressive Length Att. Recovered (i RQD/ Comments Soil/Rock Description Depth in Strength Moisture lacticity And Geologic Origin For Content hiupi, imit 200 Each Major Unit FID 0.0 0.0 NA 0.0 - 2.0'No Recovery. 1.0 2.0 - 2.6 SILT: Dark grayish brown (10YR 4/2), trace very fine to fine sand, trace (>1%) 2.0 1.2' 10 ML 267 subangular to subround fine gravel, trace 8 ppm very fine sand nodules, trace organic 8 mottling, well sorted, stiff, moist, no odor, 8 grades into below. CH CLAY: Dark yellowish brown (10YR 4/6), trace very fine to medium sand, trace 3.0 fine subangular to subround gravel, trace organic mottling, high plasticity, medium stiff to stiff, moist, no odor. 1.4 CH 33.47 4.0 - 5.4' CLAY: Dark yellowish brown (10YR 4/4),

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Rud to

Firm ARCADIS

126 N. Jefferson St., Suite 400

Milwaukee, WI 53202 (414) 276-7742

| Sam                            |                                 |                   |                  |  |          |             |              |             |                         |                     | Soil Pr | operties            |       |                  |
|--------------------------------|---------------------------------|-------------------|------------------|--|----------|-------------|--------------|-------------|-------------------------|---------------------|---------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts       | Depth in Feet    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | NSCS     | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                |                                 | 4 4               | -<br>-<br>- 5.0  | trace silt, trace very fine to medium sand, trace (>1%) fine subangular to subround gravel, trace gray mottling, little silt 4.1 - 4.2', little sand at base, high plasticity, medium stiff to stiff, moist, no odor.  |          | 1888        |              |             | •                       |                     |         |                     |       |                  |
|                                | 1.5'                            | 2 2               | 6.0              | / 6.0 - 6.2' CLAY: Dark yellowish brown (10YR 4/4), trace silt, trace very fine to medium sand, trace (>1%) fine subangular to subround gravel, trace gray mottling, high plasticity, medium stiff to stiff, moist, no odor.   | СН       | 5555        |              | 15.71       |                         |                     |         |                     |       |                  |
|                                |                                 | 2 2               | -<br>-<br>-7.0   | 6.2 - 7.5' SAND: Strong brown (7.5YR 4/6), very fine to medium- grained, mostly very fine, trace coarse sand, trace fine subangular to subround gravel, trace silt, trace clay, little silt 7.2 - 7.3', trace organic mottling, trace brown mottling, loose to medium dense, moist, no odor.   | SW       |             |              | ppm         |                         | 04                  |         |                     |       |                  |
|                                | 0.9'                            | 1<br>1<br>1       | 8.0              | / 8.0 - 8.2' CLAY: Yellowish brown (10YR 5/4), trace very fine to fine sand, trace silt, trace (>1%) fine subangular to subround gravel, high plasticity, medium stiff, moist, no odor.  | CH<br>SW |             |              | 4.41<br>ppm |                         |                     |         |                     |       |                  |
|                                |                                 | 1                 | 9.0              | 8.2 - 8.9' SAND: Reddish brown (5YR 4/4), very fine to medium grained, mostly fine, trace coarse sand, trace fine subangular to subround gravel, 1/8 inch dolomite subangular gravel at 8.8', trace organics (roots), trace organic staining, trace orange mottling, trace gray mottling 8.5-8.8', trace clay nodules, poorly sorted, moist to wet, no odor. |          |             |              |             | i.                      |                     |         |                     |       |                  |
|                                | 1.2'                            | 5<br>7<br>8<br>10 | 10.0             | 10.0 - 10.2' SAND: Reddish brown (5YR 4/4), very fine to medium grained, mostly fine, trace coarse sand, trace fine subangular to subround gravel, trace organics (roots), trace organic staining, trace orange mottling, trace gray mottling 8.5 - 8.8', trace clay nodules, poorly sorted, moist   | SW       |             |              | 2.94<br>ppm |                         |                     |         |                     |       |                  |
|                                |                                 |                   | -<br>- 11.0<br>- | to wet, no odor.  10.2 - 11.2' SAND: Yellowish brown (10YR 5/4), very fine to coarse grained, mostly fine, trace fine to medium subangular to subround gravel, some up to 1 inch, trace silt, trace orange mottling, slightly cohesive, medium dense, moist, no odor.  |          |             |              |             |                         |                     |         |                     |       |                  |
|                                | 0.5'                            | 8<br>8<br>11<br>9 | 12.0             | / 12.0 - 12.2' SAND: Yellowish brown (10YR 5/4), very fine to coarse grained, mostly fine, trace fine to medium subangular to subround gravel, some up to 1", trace silt, trace orange mottling, slightly cohesive, medium dense, moist, no odor.  | sw       |             |              | 3.83<br>ppm |                         | 8                   |         |                     |       |                  |

| Sample                              |                       |                   |     |   |      |  |              |             |                         |          | Soil Pr | operties            |       |                |
|-------------------------------------|-----------------------|-------------------|-----|---|------|--|--------------|-------------|-------------------------|----------|---------|---------------------|-------|----------------|
| Surface<br>Samples<br>Length Att. & | Recovered (in)        | Don'th in Coot    |     | Soil Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log                            | Well Diagram | FID         | Compressive<br>Strength | Moisture | Liquid  | Placticity<br>Index | P 200 | RQD.' Comments |
|                                     |                       | - 1.              | 3.0 | SAND: Very dark brown (10YR 3/3), very fine to medium- grained, mostly fine, trace fine subround gravel 12.4-12.5', well sorted, dense, moist, no odor.   |      |  |              |             | ±1                      |          |         |                     |       |                |
| 0.5                                 | 7 6<br>16<br>20<br>23 | 6                 | 4.0 | 14.0 - 14.5' SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly very fine, trace clay, trace silt, little subangular to subround fine to medium gravel, mostly dolomite, poorly sorted, dense, moist to wet, no odor.   | sw   |  |              | 3.47<br>ppm |                         |          |         |                     |       |                |
| 0.0                                 | )' 1:                 | 6 -<br>8 -<br>7 - | 7.0 | 16.0 - 18.0'<br>No Recovery.  |      | 10000000000000000000000000000000000000 |              | NA          |                         |          |         |                     |       |                |
| 1.2                                 | 1                     | 8 -<br>5 -        | 9.0 | 18.0 - 19.2' SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly very fine, trace clay, trace silt, some subangular to subround fine to medium gravel, mostly dolomite, some up to 1 inch, fractured dolostone 18.3 - 18.4', somewhat cohesive, poorly sorted, dense, moist to wet, no odor. | SW   |  |              | 4.74<br>ppm |                         |          |         |                     |       |                |
| 1.3                                 | 1                     | 3 2 2 6           | 0.0 | 20.0 - 21.3' SAND: Yellowish brown (10YR 5/4), very fine to medium grained, mostly very fine, trace coarse sand, little silt, trace to little fine subangular to subround gravel, some up to 1 inch, cohesive, dense to very dense, slow dilatancy, moist, no   | sw   |  |              | 3.89<br>ppm |                         |          |         |                     |       |                |

| Sam                            | nla          |                           |                                 |  |      |             |              |             |                         |                     | Soil Pro | operties         | ige 4 0) |                  |
|--------------------------------|--------------|---------------------------|---------------------------------|--|------|-------------|--------------|-------------|-------------------------|---------------------|----------|------------------|----------|------------------|
| Fracture<br>Surface<br>Samples | t. &<br>(ii) | Blow Counts               | Depth in Feet                   | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content |          | Placticity Index | P 200    | RQD,<br>Comments |
|                                |              |                           | •  <br>•                        |  |      |             |              |             |                         |                     |          |                  |          |                  |
|                                | 1.1          | 40<br>45<br>43<br>50-0.4" | - 22.0<br>-<br>-<br>-<br>- 23.0 | 22.0 - 23.1' SAND: Yellowish brown (10YR 5/4), very fine to medium grained, mostly very fine, trace coarse sand, little silt, fine to medium subangular to subround gravel, some up to 1", cohesive, dense to very dense, slow dilatancy, moist to wet, no odor. | SW   |             |              | 5.11<br>ppm |                         |                     |          |                  |          |                  |
|                                | 0.1'         | 50-0.2                    | - 24.0                          | 24.0 <b>- 24</b> .1'   | SW   |             |              | 3.05        |                         |                     |          |                  |          |                  |
|                                |              |                           | -<br>-<br>- 25.0                | SAND: Yellowish brown (10YR 5/4), very fine to medium grained, mostly very fine, trace coarse sand, little silt, fine to medium subangular to subround gravel, some up to 1 inch, cohesive, dense to very dense, slow dilatancy, moist to wet, no odor.          | :    |             |              | ppm         |                         |                     |          |                  |          |                  |
|                                |              |                           | -<br>- 26.0<br>-                | 26.0 - 31.0' BLIND DRILL: Refusal at 26'. Switched bits to determine if bedrock has been reached or if a thick gravel layer has  |      |             |              |             |                         |                     |          |                  |          |                  |
|                                |              |                           | -<br>- 27.0                     | been encountered. Gravel layer had been encountered. Blind drilled to bedrock at 31'.  Note: Temporary casing set to 35'.  |      |             |              |             |                         |                     |          |                  |          |                  |
|                                |              |                           | -<br>- 28.0<br>-                |  |      |             |              |             |                         |                     |          |                  |          |                  |
|                                |              |                           | -<br>- 29.0<br>-                | -  |      |             |              |             |                         |                     |          |                  |          | =                |
|                                |              |                           |                                 |  |      |             | i i          |             |                         |                     |          |                  |          |                  |

| Sam                            | ple                             |             |               |   | T    |             |              |     |                         |                     | Soil Pr         | operties            |       |                  |
|--------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                | — Т                             |             | Ť I           |   | 7    |             |              | _   | 1                       |                     | ]               |                     |       | Ι                |
|                                |                                 |             | - 30.0        |   |      |             |              |     |                         |                     | i               |                     |       |                  |
|                                |                                 |             | _             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
| !                              | !                               |             | -             |   |      |             |              | •   |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 31.0        |   |      |             |              |     |                         |                     |                 | :                   |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 | ŀ                   |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 32.0        |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 | :                   |       |                  |
|                                |                                 |             |               |   |      |             |              | 0   |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 33.0        |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             |               |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | -             |   |      |             |              |     |                         |                     |                 |                     |       |                  |
|                                | 3.1                             |             | 34.0          | 34.0 - 91.8'  |      | 1           |              | 5.8 | -                       |                     |                 |                     |       | 0%<br>Very       |
|                                |                                 |             |               | Tunnel City Group<br>Lone Rock Formation                            |      | 11          |              | ppm |                         |                     | 11              |                     |       | Poo              |

|                                |                                 |             |                            |   |      |  |   |     |                         |          |         | Pa                  | ige 6 of | 51               |
|--------------------------------|---------------------------------|-------------|----------------------------|---|------|--|---|-----|-------------------------|----------|---------|---------------------|----------|------------------|
| Samp                           |                                 |             |                            |   |      |  |   |     |                         |          | Soil Pr | operties            | _        |                  |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet              | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                            | Well Diagram  | FID | Compressive<br>Strength | Moisture | Liquid  | Placticity<br>Index | P 200    | RQD/<br>Comments |
| (36.2 - 36.3')<br>VOCs<br>BET  |                                 |             | - 35.0<br>- 36.0<br>- 37.0 | SANDSTONE: Very fine to medium grained, subangular to subround grains, moderately hard to soft, moderate to well cemented, intensely jointed, joints are horizontal, planar to cross bedded, laminated to very thin beds, rip up clasts, trace to little pores and pits, secondary mineralization throughout, glauconite lamina, iron staining, feldspathic sands to 35.5', moderate to high energy near shore environment.  34.0 - 34.2' SANDSTONE: Light brown (7.5 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Glauconite: 10%, fine grained, very well sorted, moderately hard, quartz cement, well cemented, trace pores throughout (<1mm), iron staining on outside of core as well as on fracture surface, secondary mineralization of iron, healed vertical fractures filled with iron precipitate and clay on horizontal fracture surfaces, weathered horizontal fracture surfaces.  34.2 - 35.6' GLAUCONITIC SANDSTONE: Pale brown (10 YR 6/3). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite: 20%, fine grained, moderately sorted, moderately hard, quartz and iron precipitate cement, moderately well cemented, little pits and pores throughout, larger pores contain calcite and iron secondary mineralization, iron staining on outside of core as well as on the fracture surfaces, laminated glauconite beds ranging from 1/16 - ¼", rip up clasts containing parent material cemented throughout, horizontal hairline fractures.  35.6 - 36.9' SANDSTONE: Light grey (10 YR 7/1). Sand: 90%, very fine to fine grained, subangular to subrounded, Glauconite: 10%, fine grained, laminated, very well sorted, soft, weakly cemented with quartz, friable, trace pits throughout, iron staining on outside of core as well as on the fracture surface, moderate bioturbation, burrows filled with clay and iron precipitate, no discernable bedding in locations with heavy bioturbation, areas with less bioturbation bedding is very thin and laminated, 36.29-36.45' displays cross bedding with glauconite lamina, healed vertical fractures |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |   |     |                         |          |         |                     |          |                  |
|                                |                                 |             |                            | SANDSTONE: Light grey (10 YR 7/1).  |      | 22                                     | \$555<br>\$555<br>\$555<br>\$555<br>\$555<br>\$555<br>\$555<br>\$55 |     |                         |          |         |                     |          |                  |

| Sam  | ıple      |             |               |   |      |   |  | <u> </u>   |                         |                     | Soil Pr | operties            | ige / o | 1 1              |
|--|-----------|-------------|---------------|---|------|---|--|------------|-------------------------|---------------------|---------|---------------------|---------|------------------|
| Fracture<br>Surface<br>Samples                                     | t. & (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                             | Well Diagram                           | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200   | RQD/<br>Comments |
|  |           |             | 39.0          | subangular to subrounded, Glauconite: 5%, fine to medium grained, laminated layers and fine grained size pieces throughout, sandstone is very well sorted, moderately hard, moderately well cemented, moderately weathered,   |      | 1222                                    |  |            |                         |                     |         |                     |         |                  |
| (00.0  | 4.8'      |             | 39.0          | laminated bedding, trace pits to pores, little bioturbation, burrows filled with clay and iron precipitate, fractures present at high angles to bedding, fractures filled with secondary iron and clay precipitation.   |      | ~~~~                                    | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | 6.3<br>ppm |                         | 0.40/               |         |                     |         | 38.3%<br>Poor    |
| (39.3 -<br>39.8)<br>PHYS<br>PROP                                   |           |             |               | Physical Properties Sample  |      |   | 25.55                                  |            |                         | 9.4%                |         |                     |         |                  |
| (39.8 -<br>39.9')<br>VOCs<br>BF<br>(40.2 -<br>40.3')<br>VOCs<br>f4 |           |             | - 40.0        | 39.9 - 40.6' SANDSTONE: Yellowish brown (10 YR 5/8). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay: 20%, sandstone is moderately well sorted, moderately hard, moderately weathered, well cemented with clay and iron precipitate, iron staining on outside of core as well as on fracture surfaces, thinly bedded, little pits throughout, horizontal fractures filled with secondary iron precipitation and very fine sand and clay, trace burrows filled with clay and iron precipitate.  |      | ~~~~~~~                                 |  |            | 51                      |                     |         |                     |         |                  |
|  |           |             | - 41.0        | 40.6 - 42.9' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Glauconite: 10%, very fine grain sized grains throughout as well as ½" wide lenses, sandstone is very well sorted, moderately hard, moderately well cemented to friable, moderate weathering, medium bedding, trace pits, highly bioturbated where burrows are filled with clay and iron precipitate, healed horizontal hairline fractures, several horizontal fractures that are filled with secondary mineralization of iron and calcite as well and very fine sand and clay, trace pyrite precipitation in |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |  |            |                         |                     |         |                     |         |                  |
| (42 -<br>42.1')<br>VOCs<br>BET                                     |           |             | - 42.0<br>-   | horizontal hairline fractures at 41.95'.  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |  |            |                         |                     |         |                     |         |                  |
| (42.8 -<br>42.9')<br>VOCs  |           |             |               | 42.9 - 43.8'  |      | ? ?<br>? ?<br>? ?                       | \$ 550,000                             |            |                         |                     |         |                     |         |                  |

|                                 | 1                               |             | 1                                     |   |      |  |              |            | 1                       |          | Soil De         | operties            | ige o o | T                |
|---------------------------------|---------------------------------|-------------|---------------------------------------|---|------|--|--------------|------------|-------------------------|----------|-----------------|---------------------|---------|------------------|
| Sam                             |                                 | kά          | # # # # # # # # # # # # # # # # # # # |   |      | bo   | ш            |            | <u>.</u>                |          | JOII FF         | operues             |         |                  |
| Surface<br>Samples              | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                         | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log  | Well Diagram | FID        | Compressive<br>Strength | Moisture | Liquid<br>Limit | Placticity<br>Index | P 200   | RQD/<br>Comments |
| 4.5                             | ı I                             |             | ⊢ 43.0                                | GLAUCONITIC SANDSTONE: Pale   | l    | 7/5  |              | i          | ı                       |          | I               |                     |         | I                |
| AF                              |                                 |             | - 44.0                                | brown (10 YR 6/3). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite: 20%, fine grained, moderately well sorted, laminated cross beds, laminated glauconite beds ranging from 1/16 - ¼", moderately hard, quartz and iron precipitate cernent, well cemented, little pits and pores throughout, larger pores contain calcite and iron secondary mineralization, iron staining on outside of core as well as on the fracture surface, healed vertical fractures filled with very fine sand and iron precipitate, weathered horizontal fracture surfaces.  |      | 7.6.20<br>7.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2.6.20<br>2. |              |            |                         |          |                 |                     |         | 400/             |
| 44.6 -<br>44.7')<br>VOCs<br>BET | 4.7                             |             | - 45.0                                | 44.0' - 44.9' GLAUCONITIC SANDSTONE: Pale brown (10 YR 6/3). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite: 20%, fine grained, moderately well sorted, laminated cross beds, laminated glauconite beds ranging from 1/16 - ¼", moderately hard, quartz and iron precipitate cement, well cemented, little pits and pores throughout, larger pores contain calcite and iron secondary mineralization, rip up clasts containing parent sediment rimmed with iron precipitate, iron staining on outside of core as well as on the fracture surface,   |      | 2/14/14/14/14/14/14  |              | 6.0<br>ppm |                         |          |                 |                     |         | 40%<br>Poor      |
| 45.6 -<br>45.7')<br>VOCs<br>BF  |                                 |             | - 46.0                                | healed horizontal fractures filled iron precipitate, weathered horizontal fracture surfaces.  44.9 - 45.9' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, fine grained, moderately well cemented with quartz cement, moderately hard, slight weathering, laminated cross bedding, weakly bedded, trace bioturbation where burrows are filled with clay and iron precipitate, trace pores throughout, horizontal hairline fractures filled with clay and very fine sand, secondary mineralization of iron on outside of core as well as fracture surfaces, horizontal fracture surfaces display clay and very fine sand infilling. |      |  |              |            |                         |          |                 |                     |         |                  |
| (46.9 -<br>47')<br>VOCs<br>AF   |                                 |             | - 47.0                                | 45.9 - 46.2' SANDSTONE: Yellowish brown (10 YR 5/8). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay: 20%, sandstone is moderately well sorted, moderately hard, moderately weathered, well cemented with clay and iron precipitate, iron staining on outside of core as well as on fracture surfaces, thinly bedded, little pits throughout, horizontal fractures filled with secondary iron precipitation and very fine sand and clay, trace burrows filled with clay and iron precipitate.  46.2 - 46.4'  |      | ***  |              |            |                         |          |                 |                     | 1       |                  |

| Sample                             | 1           |               |   |      |   |              |            |                         |                     | Soil Pro | operties         | ige 9 of | Γ                |
|------------------------------------|-------------|---------------|---|------|---|--------------|------------|-------------------------|---------------------|----------|------------------|----------|------------------|
| Surface Samples Length Att. & edge | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content |          | Placticity Index | P 200    | RQD:<br>Comments |
| (48.2 -<br>48.3')<br>VOCs<br>BET   |             | - 48.0        | SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, fine grained, moderately well cemented with quartz cement, moderately hard, slight weathering, laminated cross bedding, weakly bedded, trace bioturbation where burrows are filled with clay and iron precipitate, trace pores throughout, horizontal hairline fractures filled with clay and very fine sand, secondary mineralization of iron on outside of core as well as fracture surfaces, horizontal fracture surfaces display clay and very fine sand infilling.  |      |   |              |            |                         |                     |          |                  |          |                  |
| 3.6                                |             | 49.0          | 46.4 - 46.6' GLAUCONITIC SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, moderately weathered, well cemented with clay and iron precipitate, iron staining on outside of core as well as on fracture surfaces, horizontal fracture surfaces in filled with very fine sand and   |      | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \   |              | 5.8<br>ppm |                         |                     |          |                  |          | 0%<br>Poor       |
| (49.9 -<br>50')<br>VOCs<br>BET     |             | - 50.0        | iron precipitate, horizontal hairline fractures healed with iron precipitate, trace pores throughout, rip up clasts contain parent sediment that is rimmed with glauconite and iron precipitate.  46.6 - 47.2' SANDSTONE: Very pale brown (10 YR 8/2). Sand: ~100%, very fine to medium grained, mostly very fine to fine grained, subangular to subrounded, trace glauconite from 46.61 - 46.66', sandstone is very well sorted, fine grained, well cemented with quartz cement, moderately hard, very slight weathering, thinly bedded, little pores to vugs throughout, vugs are filled with secondary mineralization of euhedral  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |          |                  |          |                  |
| (51 -<br>51.1')<br>VOCs<br>BET     | 5           | - 51.0        | calcite grains, some pits are completely filled with calcite, secondary mineralization of iron precipitate in healed horizontal fractures and on open horizontal fractures, open fractures are rough and irregular displaying infilling, iron staining on outside of core as well as on fresh fracture faces.  47.2 - 48.7' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, fine grained, moderately hard, moderately weathered, well cemented with quartz and iron precipitate, iron staining on outside of core as well as on fracture surfaces, thinly bedded, little pores to vugs throughout, vugs range in openness up to ¼", vugs contain secondary |      | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \   |              |            |                         |                     |          |                  |          |                  |

|                                  |                                 |             |                  |   |      |   |              |            | _                       |                     |                 |                     | ige 10 | of 51                 |
|----------------------------------|---------------------------------|-------------|------------------|---|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|-----------------------|
| Sam                              |                                 |             |                  |   |      |   |              |            |                         |                     | Soil Pro        | operties            |        |                       |
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments      |
| (52.2 -<br>52.3')<br>VOCs<br>BET |                                 |             | - 52.0<br>- 53.0 | mineralization of iron precipitate in healed horizontal fractures and on open horizontal fractures, open fractures are rough and irregular displaying infilling.  49.0 - 51.0' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Glauconite: 10%, fine grain sized glauconite throughout as well as laminated glauconite beds, sandstone is well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, weakly thinly bedded, beds are poorly displayed due to severe bioturbation, burrows are filled with clay and iron precipitate, moderately well cemented to friable where strata display higher percentages of bioturbation, horizontal hairline fractures healed with iron precipitate and clay, intensely jointed, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization |      |   |              |            |                         |                     |                 |                     |        |                       |
|                                  | 2.6'                            |             | 54.0             | of iron precipitate.  51.0 - 51.4' GLAUCONITIC SANDSTONE: Pale brown (10 YR 6/3). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite: 20%, sandstone is fine grained, well sorted, laminated cross beds, laminated glauconite beds ranging from 1/16 - ½", moderately hard, quartz and iron precipitate cement, moderately cemented to friable, little pits and pores throughout, secondary mineralization of iron precipitate, iron staining on outside of core as well as on the fracture surface, healed horizontal fractures filled iron precipitate, weathered horizontal fracture surfaces.   |      | 2 |              | 5.7<br>ppm |                         |                     |                 |                     |        | 18.3%<br>Very<br>Poor |
| (54.6 -<br>54.7')<br>VOCs<br>BET |                                 |             | - 55.0           | 51.4 - 52.1' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal fractures, well cemented with quartz and iron precipitate, iron staining on outside of core as well as on fracture surfaces, thinly bedded, trace bioturbation, burrows filled with clay and iron precipitate, little pores to pits throughout, secondary mineralization of euhedral calcite grains and iron precipitate in pits and fracture faces, secondary mineralization of iron precipitate in healed horizontal fractures   |      | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   |              |            |                         |                     |                 |                     |        |                       |
| (56 -<br>56.1')<br>VOCs          |                                 |             | -<br>- 56.0      | and on open horizontal fractures, intensely jointed, fractures range in attitude from horizontal to shallow angle, open fractures are rough and irregular displaying infilling.   |      | 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  |              |            |                         |                     |                 |                     |        |                       |

| _ |                                 |                                 |             |               |  | _    |             | ,            |            |                         |                     |                 |                     | ige 11 | <del></del>                      |
|---|---------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|----------------------------------|
|   | Sam                             |                                 |             |               |  |      |             |              |            | -                       |                     | Soil Pro        | perties             |        |                                  |
|   | Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments                 |
|   | BET                             |                                 |             | - 57.0        | 52.0 - 52.6' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, sandstone is well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, very thinly bedded, beds are poorly displayed due to severe bioturbation, burrows are filled with clay and iron precipitate, moderately well cemented to friable where strata display higher percentages of bioturbation, horizontal hairline fractures healed with iron precipitate and clay, intensely jointed, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  54.0 - 54.1' SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, very thinly bedded, bioturbation visible on open horizontal fracture faces, burrows are filled with clay and iron precipitate, well cemented, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  54.1 - 56.0' |      |             |              |            |                         |                     |                 |                     |        |                                  |
|   | (59.4 -<br>59.5')<br>VOCs<br>BF | 3.12'                           |             | 59.0          | SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to vugs throughout, vugs range in openness up to ¼", vugs contain secondary mineralization of euhedral calcite grains and iron precipitate, secondary mineralization of iron precipitate in healed horizontal fractures are rough and irregular displaying infilling.  56.0 - 59.6' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering   |      |             |              | 4.9<br>ppm |                         |                     |                 |                     |        | 100%<br>Excellent<br>29%<br>Poor |

|                                  | <del>-, 1</del>                 |             | T             | _  | 1    |                                       |              |            |                         |                     | <u> </u>        |                     | ige 12 ( | 01 51<br>        |
|----------------------------------|---------------------------------|-------------|---------------|--|------|---------------------------------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|----------|------------------|
| Sam                              |                                 |             |               |  |      |                                       | _            |            |                         |                     | Soil Pr         | operties            |          |                  |
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                           | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200    | RQD/<br>Comments |
| (60.7 -<br>60.8')<br>VOCs<br>BF  |                                 |             | -<br>- 61.0   | outside of core as well as on fracture surfaces, little pores to pits throughout, pits contain secondary mineralization of euhedral calcite grains and iron precipitate, secondary mineralization of iron precipitate in healed horizontal fractures, open horizontal fractures are rough and irregular displaying infilling.  |      |                                       |              |            |                         |                     |                 |                     |          |                  |
| (60.8 -<br>61.3)<br>PHYS<br>PROP |                                 |             | -             | 59.6 - 59.8' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as  |      | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |              |            |                         | 9.9%                |                 |                     |          |                  |
| (61.5 -<br>61.6')<br>VOCs<br>BET |                                 |             | -<br>- 62.0   | on horizontal open fractures, very thinly bedded, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, trace pores throughout, secondary mineralization of iron precipitate in healed horizontal fractures, open horizontal fractures are rough and irregular displaying infilling of clay and very fine sand.   |      |                                       |              |            |                         |                     |                 |                     |          |                  |
|                                  |                                 |             | - 63.0        | 59.8 - 60.5' SANDSTONE: Yellow (10 YR 7/8). Sand: 95%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay and Iron Precipitate: 5%, sandstone is very well sorted, soft and friable, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, thinly bedded, bioturbated with burrows filled by clay and iron precipitate, poorly cemented, secondary mineralization of iron precipitate on outside of core as well as on open horizontal fractures and healed horizontal hairline fractures, open horizontal fractures are smooth to rough as they are very friable and display in filling of clay and very fine sand. |      |                                       |              |            |                         |                     |                 |                     |          |                  |
|                                  |                                 |             | 64.0          | 60.5 - 61.3' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores, secondary mineralization of iron precipitate in healed horizontal fractures, highly jointed, open horizontal fractures are rough and irregular displaying infilling.   |      |                                       |              |            | 12                      |                     |                 |                     |          |                  |
| (64.6 -<br>64.7')<br>VOCs<br>BF  | 5.0'                            |             |               | Physical Properties Sample 61.9 - 62.1' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay   |      | 222                                   | 25555555     | 5.0<br>ppm |                         |                     |                 |                     |          | 71.7%<br>Fair    |

| Sam  |                                 |             |               |  | <u> </u> |  |              |     | ]                       |                     | Soil P | roperties           | age 13 |                  |
|--|---------------------------------|-------------|---------------|--|----------|--|--------------|-----|-------------------------|---------------------|--------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                       | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS     | Graphic Log                            | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid | Placticity<br>Index | P 200  | RQD/<br>Comments |
| 65.4 -<br>65.5')<br>VOCs<br>BET                      |                                 |             | 65.0          | and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores, secondary mineralization of iron precipitate in healed horizontal fractures, highly jointed, open horizontal fractures are rough and irregular displaying infilling.   |          | ~~~~~~~~~                              |              |     |                         |                     |        |                     |        |                  |
| (66.4 -<br>66.5')<br>VOCs<br>BF<br>(67.3 -<br>67.4') |                                 |             | - 67.0        | 62.1 - 62.5' GLAUCONITIC SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite and iron precipitate: 20%, glauconite is fine grain sized and throughout the sandstone as well as in laminated beds, sandstone is moderately well sorted, soft to moderately hard, fine grained, thinly bedded, severe weathering on outside of core and on horizontal fracture faces, moderate to poor cementation of quartz and iron precipitate, semi-friable, little pits and pores throughout, secondary mineralization of iron precipitate, iron staining on outside of core as well as on the fracture surface, intensely jointed, healed horizontal fractures filled iron precipitate, open horizontal fracture surfaces are rough and irregular displaying in filling of clay and very fine sand, horizontal fractures are located at bedding planes where laminated glauconite beds are present. |          |  |              |     |                         |                     |        |                     |        |                  |
| VOCs<br>BF   |                                 |             | - 68.0        | 62.5 - 62.6' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 95%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay and Iron Precipitate: 5%, sandstone is very well sorted, very soft and friable, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, thinly bedded, very poorly cemented, secondary mineralization of iron precipitate on outside of core as well as on open horizontal fractures.   |          | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |              |     |                         |                     |        |                     |        |                  |
| (68.5 -<br>68.6')<br>VOCs<br>BET                     |                                 |             | - 69.0        | 64.6 - 67.1' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay and Iron Precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, medium bedding, bioturbated with burrows filled by clay and iron precipitate, moderate quartz cementation, secondary mineralization of iron precipitate on outside of core as well as on open horizontal fractures and healed horizontal fractures are smooth to rough  |          |  |              |     |                         |                     |        |                     |        |                  |

| Sam  | nple |             |               |  |      | <u> </u>                                |   |            |                         |          | Soil Pr         | operties            | ige 14 | 71 21            |
|--|------|-------------|---------------|--|------|---|---|------------|-------------------------|----------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                               | t. & | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log                             | Well Diagram                            | FID        | Compressive<br>Strength | Moisture | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
|  |      |             | -             | as they are friable and display in filling of clay and very fine sand.   |      | 2 3                                     | 2000                                    |            |                         |          |                 |                     | 0      |                  |
| (70.2 -<br>70.3')<br>VOCs<br>BF<br>(70.6 -<br>70.7')<br>VOCs | 5.0' |             | 70.0          | 67.1 - 67.9' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores and pits throughout, trace glauconite lenses, secondary mineralization of iron precipitate in healed horizontal hairline fractures, moderately jointed, open horizontal fractures are rough and irregular displaying in filling of clay and very fine |      |   |   | 4.5<br>ppm |                         |          |                 |                     |        | 46.7%<br>Poor    |
| f5   |      |             | - 71.0<br>-   | sand.  67.9 - 69.6' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is very well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and  |      | 1/2//27                                 |   |            |                         |          |                 |                     |        |                  |
| (71.7 -<br>71.8')<br>VOCs<br>BF                              |      |             | - 72.0        | iron precipitate, trace fine grained sized glauconite grains throughout, severe bioturbation, burrows are filled with clay and very fine sand and rimmed by iron precipitate, iron precipitate filling healed horizontal hairline fractures, secondary mineralization on open horizontal fractures that are rough and irregular displaying infilling of clay and very fine sand.   |      | 1/2/1000                                |   |            |                         |          |                 |                     |        | :                |
| (72.9 -<br>73')<br>VOCs<br>BF                                |      |             | -<br>- 73.0   | 69.6 - 70.0' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, fine grained, moderately well cemented with quartz cement, moderately hard, slight weathering, laminated cross bedding, weakly bedded, trace bioturbation where burrows are filled with clay and iron precipitate, trace pores throughout, horizontal hairline fractures filled with clay and very fine sand, secondary mineralization of iron on outside of core as well as fracture surfaces, horizontal fracture surfaces display clay and very fine sand infilling, very thin glauconite bed at base of sandstone strata.  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |   |            |                         |          |                 |                     |        |                  |
|  |      |             | -             | 70.0 - 71.2' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard,  |      | 2222                                    | 000000000000000000000000000000000000000 |            |                         |          |                 |                     | ;      |                  |

| Samj                           |                                 |             |               |   |      |   |              |     |                         |                     | Soil Pro        | perties             | }-    |                  |
|--------------------------------|---------------------------------|-------------|---------------|---|------|---|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log                             | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                |                                 |             | - 74.0<br>-   | fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, trace bioturbation with burrows filled by clay and rimmed with iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to pits throughout, secondary mineralization of iron precipitate in healed horizontal hairline fractures, open horizontal fractures are  |      | ~~~~~~~~~~                              |              |     |                         |                     |                 |                     |       |                  |
| 74.7 -<br>74.8')<br>VOCs<br>f7 | 4.8'                            |             | -<br>- 75.0   | rough and irregular displaying in filling of clay and very fine sand as well as iron precipitate.  71.2 - 71.8' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, fine grained, moderate to poorly cemented  |      | *****                                   |              | NM  |                         |                     |                 |                     |       | 68.3%<br>Fair    |
| 75.5 -<br>75.6')<br>/OCs<br>BF |                                 |             |               | with quartz cement, soft and semi-friable, slight weathering, laminated cross bedding, weakly bedded, trace bioturbation where burrows are filled with clay and iron precipitate, trace pores throughout, horizontal hairline fractures filled with clay and very fine sand, secondary mineralization of iron on outside of core as well as fracture surfaces, horizontal fracture surfaces are soft and irregular due to the friability of the sandstone and display clay and very fine sand infilling.  |      | ~~~~~~~~~                               |              |     |                         |                     |                 |                     |       |                  |
| 76.6 -<br>76.7')<br>/OCs<br>BF |                                 |             | 77.0          | 71.8 - 74.6' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is very well sorted, moderately hard to soft, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, thinly bedded, moderately well cemented with quartz and iron precipitate, trace fine grained sized glauconite throughout as well as interbedded glauconite lenses and laminated beds, alternating 2-3" beds of horizontally bedded laminated undisturbed sandstone and thinly bedded |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |     |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 77.0        | heavily bioturbated sandstone, bioturbated beds display severe bioturbation where bedding is non-discernible, burrows are filled with clay and very fine sand and rimmed by iron precipitate, iron precipitate fills healed horizontal hairline fractures, secondary mineralization exists on open horizontal fractures, fractures are rough and irregular displaying infilling of clay and very fine sand.  74.6 - 77.6' SANDSTONE: Light yellowish brown (10  |      | NANA AND                                |              |     |                         |                     |                 |                     |       |                  |
| 78.1 -                         |                                 |             | <b>– 78.0</b> | YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is well sorted, moderately hard, fine grained, moderate weathering displayed   |      |   | 5555555      |     |                         |                     |                 |                     |       |                  |

|   |                | -           |               |   |      |  | -            | I          |                         |                     | a               |                     | ige 16 | 01.21            |
|---|----------------|-------------|---------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Sample  |                |             |               |   |      |  |              |            |                         |                     | Soil Pr         | operties            |        |                  |
| Fracture<br>Surface<br>Samples<br>Length Att. & | Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                              | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| 78.2')<br>VOCs<br>AF                            |                |             | 79.0          | on outside of core as well as on horizontal open fractures, medium bedding, interbedded glauconite lenses, little bioturbation where burrows filled with clay and very fine sand and rimmed with iron, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, secondary mineralization of iron precipitate in healed horizontal hairline fractures, highly jointed, open horizontal fractures are rough and irregular displaying in filling of clay and very fine sand as well as iron precipitate.  77.6 - 78.9' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, fine grained, moderately well cemented with quartz cement, moderately hard, slight weathering on cutside of core and |      | 14/4/1/2/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |                 |                     |        |                  |
| (79.7 -<br>79.8')<br>VOCs<br>BF                 | .1'            | -           | - 80.0        | weathering on outside of core and fracture faces, laminated horizontal and cross bedding, trace bioturbation where burrows are filled with clay and iron precipitate, trace horizontal healed hairline fractures filled with iron precipitate, secondary mineralization of iron on outside of core as well as fracture surfaces, horizontal fracture surfaces display clay and very fine sand infilling.  |      | ~~~~~                                    |              | 4.6<br>ppm |                         |                     |                 |                     |        | 36.7%<br>Poor    |
| (80.6 -<br>80.7')<br>VOCs<br>BET                |                |             | - 81.0        | 78.9 - 79.4' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, interbedded glauconite lenses, some bioturbation where burrows filled with clay and very fine sand and rimmed with iron, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, secondary mineralization of iron precipitate in healed horizontal hairline fractures, highly jointed, open horizontal fractures are rough and   |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~  |              |            |                         |                     |                 |                     |        |                  |
| (81.4 -<br>81.5')<br>VOCs<br>BET                |                |             | - 82.0        | irregular displaying in filling of clay and very fine sand as well as iron precipitate.  79.6 - 82.8' SANDSTONE: Very pale brown (10 YR 7/3). Sand: 90%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is well sorted, moderately hard to soft, fine grained, moderate weathering on the   |      | ~~~~~~~                                  |              |            |                         |                     |                 |                     |        |                  |
| (82.3 -<br>82.4')<br>VOCs<br>AF                 |                |             | -             | outside of the core as well as on the fracture faces, medium irregular beds, highly jointed, severe bioturbation with burrows filled by clay and rimmed with iron precipitate, trace fine grained sized glauconite throughout, thin bed of intensely jointed laminated glauconite with little fine grained sand from 82.0-  |      | 2222                                     |              |            |                         |                     |                 |                     |        |                  |

| Sam                              |                                 |             |               |  |      |   |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|----------------------------------|---------------------------------|-------------|---------------|--|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                  |                                 |             | - 83.0        | 82.4', moderately well cemented with clay and quartz cement, secondary mineralization of iron precipitate and calcite on open horizontal fractures, healed hairline fractures are filled with clay and iron precipitate, open horizontal fracture faces are irregular and semirough to soft displaying in filling of clay and very fine sand.  |      | ~~~~~                                   |              |            |                         |                     |                 |                     |       |                  |
| (82.6 -<br>83.1)<br>PHYS<br>PROP |                                 |             | - 84.0        | 82.8 - 83.3' SANDSTONE: Very pale brown (10 YR 7/3). Sand: 95%, very fine to fine grained, subangular to subrounded, Glauconite: 5%, fine grained, sandstone is very well sorted, moderately well cemented, soft and semi-friable, fine grained, slightly weathered on outside of core and on open fracture faces, very thinly bedded, little bioturbation where burrows are filled with clay and very fine sand, glauconite lens at base of sandstone, secondary mineralization of iron precipitate on open fractures, open horizontal fracture faces are soft and smooth displaying in filling of clay and very fine sand.  Physical Properties Sample |      | 2 2                                     |              |            |                         | 13.0%               |                 |                     |       |                  |
| (84.7 -<br>84.8')<br>VOCs<br>f6  | 4.8'                            |             | - 85.0        | 84.6 - 87.7' SANDSTONE: Very pale brown (10 YR 7/3). Sand: 90%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is well sorted, moderately hard to soft, fine grained, moderate weathering on the outside of the core as well as on the   |      | 22222                                   |              | 9.3<br>ppm |                         |                     |                 |                     |       | 65%<br>Fair      |
| (85.6 -<br>85.7')<br>VOCs<br>BET |                                 |             | - 86.0        | fracture faces, medium irregular beds, highly jointed, severe bioturbation with burrows filled by clay and rimmed with iron precipitate, trace fine grained sized glauconite throughout, moderately cemented where strata display less bioturbation to poorly cemented where bioturbation is more severe, friable in poorly cemented strata, secondary mineralization of iron precipitate, healed hairline fractures are filled with clay and iron precipitate, open horizontal fracture faces are irregular and soft displaying in filling of clay and very fine sand.  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |                 |                     |       |                  |
| (86.3 -<br>86.4')<br>VOCs<br>f7  |                                 |             | -             |  |      |   |              |            |                         | 81                  |                 | :                   |       |                  |

| Sam  | nle          |             |                       |   |      |   |              |           | _                       |                     | Soil Pr | operties | ige 18 | 01 21            |
|--|--------------|-------------|-----------------------|---|------|---|--------------|-----------|-------------------------|---------------------|---------|----------|--------|------------------|
| Fracture<br>Surface<br>Samples                               | t. &<br>(in) | Blow Counts | Depth in Feet         | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs | Graphic Log                             | Well Diagram | FID       | Compressive<br>Strength | Moisture<br>Content |         | ity      | P 200  | RQD/<br>Comments |
| (88 -<br>88.1')<br>VOCS<br>BF                                |              |             | - 88.0<br>- 89.0      | 87.7 - 89.0' GLAUCONITIC SANDSTONE: Pale olive (5Y 6/3). Sand 80%, very fine to fine grained, subangular to subrounded, Glauconite and clay: 20%, fine grained in size, sandstone is moderately well sorted, very soft, fine grained, severe weathering of the core where strata falls apart, thinly bedded, highly jointed, severe bioturbation with burrows filled by clay and rimmed with iron precipitate, some fine grained glauconite throughout as well as glauconite lenses and very thin glauconite beds, poor to very poorly cemented and friable, secondary mineralization of iron precipitate, open horizontal fracture faces are irregular and soft due to the friability of the sandstone and display in filling of clay and very fine sand as well as iron precipitate, fractures occur at glauconitic bedding planes.  89.0 - 89.4 SANDSTONE: Very pale brown (10 YR 7/3). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is well sorted, moderately hard, fine grained, slight weathering on the outside of the core as well as on the fracture faces, thinly bedded, bioturbation with |      |   |              |           |                         |                     |         |          |        |                  |
| (90.5 -<br>90.6')<br>VOCs<br>AF<br>(91.2 -<br>91.3')<br>VOCs | 4.7'         |             | - 90.0<br>-<br>- 91.0 | burrows filled by clay and rimmed with iron precipitate, moderately well cemented, secondary mineralization of iron precipitate, healed horizontal hairline fractures are filled with iron precipitate, open horizontal fracture faces are smooth and displaying in filling of clay and very fine sand as well as iron precipitate.  89.6 - 91.8 SANDSTONE: Very pale brown (10 YR 7/4). Sand: 70%, very fine to fine grained, subangular to subrounded, Glauconite and iron precipitate: 30%, sandstone is moderately sorted, soft to moderately hard, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, medium irregular beds, moderately jointed, severe bioturbation with burrows filled by clay and rimmed with iron precipitate, trace pores to vugs throughout, vugs range in openness up to 1-1/2" and contain euhedral calcite, little fine grained sized glauconite throughout as well as thinly bedded glauconite layers, moderately well cemented where lower percentages of glauconite exist to poorly  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              | 20<br>ppm |                         |                     |         |          |        | 78.3%<br>Good    |

| Sam                               | nole      |             |               |  |      | Т           |              |            |                         |                     | Soil Pro | operties            | ge 19 | T                |
|-----------------------------------|-----------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|----------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | t. & (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content |          | Placticity<br>Index | P 200 | RQD/<br>Comments |
| BF<br>(92 -<br>92.1')             |           |             | - 92.0        | cemented where there are higher percentages of glauconite, friable in poorly cemented strata, secondary mineralization of iron precipitate and calcite, healed hairline fractures are filled with clay and iron precipitate, open horizontal fractures occur at bedding planes and have faces that are irregular and soft which display in filling of clay and very fine sand, increasing glauconite percentages with depth.   |      |             |              |            |                         |                     |          |                     |       | E C              |
| /OCs<br>f10                       |           |             | _             | 91.8 - 100.1' Elk Mound Group Wonewoc Formation: Ironton (Transition) Member   |      |             |              |            |                         |                     |          |                     |       |                  |
| (92.8 -<br>(92.9')<br>VOCs<br>f18 |           |             | 93.0          | Sandstone: Very fine to medium grained, soft to moderately hard, poorly to well cemented, friable, moderately to highly jointed, joints are horizontal to low angle at bedding planes, planar to cross bedding, low angle cross beds (up to 30 degrees), laminated to very thin beds, iron staining throughout, glauconitic to 96', moderate energy nearshore environment.   |      |             |              |            |                         |                     |          |                     |       |                  |
|                                   |           |             | - 94.0        | SANDSTONE: Olive yellow (5Y 6/6). Sand: 95%, fine grained, subangular to subrounded, Glauconite: 5%, fine grained in size throughout, sandstone is very well sorted, moderately hard, fine grained, slight weathering on outside of core as well as open fracture faces, laminated horizontal and cross beds, intensely to highly jointed with fractures occurring at bedding planes, trace bioturbation where burrows are filled with clay and very fine sand, trace pits to pores throughout, moderately well cemented, secondary mineralization of iron precipitate on the outside of the core and fracture faces as well as throughout the sandstone, healed horizontal hairline fractures are filled with very fine sand and iron precipitate, iron nodules exist throughout the sandstone where they are heavily oxidized, sandstone contains bands of laminated iron oxidized/stained |      |             |              |            |                         |                     |          |                     |       |                  |
| 94.6 -<br>94.7')<br>/OCs<br>BET   | 4.9'      |             | 95.0          | beds, open horizontal fractures have faces that are smooth and soft which display infilling of clay and very fine sand.  94.6 - 98.2' SANDSTONE: Olive yellow (5Y 6/6). Sand: 95%, fine grained, subangular to subrounded, Glauconite: 5%, fine  |      |             |              | 7.1<br>ppm |                         | 11                  |          |                     |       | 63.3%<br>Fair    |
| 95.5 -<br>95.6')<br>VOCs<br>BET   |           |             | -             | grained in size throughout, sandstone is very well sorted, soft to moderately hard, fine grained, slight weathering on outside of core as well as open fracture faces, laminated horizontal and cross beds, intensely to highly jointed with fractures occurring at bedding planes, trace bioturbation where burrows are filled with clay and very fine sand, trace pits to pores throughout, trace clay lenses rimmed with iron precipitate, moderately   |      |             |              |            |                         |                     |          |                     |       |                  |

| Sam                             |                                 |             |                  |  |      |   |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|---------------------------------|---------------------------------|-------------|------------------|--|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Sämples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                                     | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (96.4 -<br>96.5')<br>VOCs<br>BF |                                 |             | - 96.0<br>-      | well cemented, secondary mineralization of iron precipitate on the outside of the core and fracture faces as well as throughout the sandstone, healed horizontal hairline fractures are filled with very fine sand and iron precipitate, iron nodules exist throughout the sandstone where they are heavily oxidized, sandstone contains bands of laminated iron oxidized/stained beds, open fractures are horizontal to shallow and have faces that are smooth and soft which display infilling of clay and very fine sand.                                     |      | 12/12/12/12/12/12/12/12/12/12/12/12/12/1        |              |            |                         |                     |                 |                     |       |                  |
| (97.5 -<br>97.6')<br>VOCs<br>f8 |                                 |             | - 97.0           |  |      | 2/2/2/2/2/2                                     |              |            |                         |                     |                 |                     |       | 60               |
| (98.3 -<br>98.4')<br>VOCs<br>AF |                                 |             | - 98.0<br>-<br>- | 98.2 - 99.5' SANDSTONE: Brownish yellow (10 YR 6/6). Sand: 95%, fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, fine grained in size throughout, sandstone is very well sorted, soft to moderately hard, fine grained, moderately severe weathering on outside of core as well as open fracture faces, laminated horizontal and cross beds, intensely jointed with fractures occurring at bedding planes, trace pores throughout, moderately well cemented, secondary mineralization of iron precipitate on the outside of the core |      |   |              |            |                         |                     |                 |                     |       |                  |
| (99.5 -<br>99.6')<br>VOCs<br>BF |                                 |             | - 99.0<br>-      | and fracture faces as well as throughout the sandstone, healed to moderately healed horizontal hairline fractures are filled with clay and iron precipitate, iron nodules exist throughout the sandstone where they are heavily oxidized, heavy iron staining throughout, sandstone contains bands of laminated iron oxidized/stained beds, open fractures are horizontal to shallow and have faces that are smooth to irregular and soft which display infilling of clay and very fine sand.  |      | 7/A/<br>2/3/2<br>7/A/<br>2/3/2<br>7/A/<br>2/3/2 |              |            |                         |                     |                 |                     |       |                  |
|                                 | 4.6'                            |             |                  | 100.1 - 124.6' Elk Mound Group Wonewoc Formation: Ironton Member   |      |   | 2000         | 1.9<br>ppm | :                       |                     |                 |                     |       | 40%<br>Poor      |
|                                 |                                 |             | - 100.0          | Sandstone: Fine to medium grained,<br>subround to round grains, moderately<br>hard to soft, moderately cemented, highly<br>to intensely jointed, joints are horizontal,<br>planar to cross bedding, laminated beds,  |      |   |              |            |                         |                     |                 |                     | i     |                  |

| r   | . 1                             |             | 1               |   |       |                  |              |     | ···                     |                     |         |                     | ge 21 | of 51            |
|---|---------------------------------|-------------|-----------------|---|-------|------------------|--------------|-----|-------------------------|---------------------|---------|---------------------|-------|------------------|
| Sam   | - 1                             |             |                 |   |       |                  |              |     |                         |                     | Soil Pr | operties            |       |                  |
| Fracture<br>Surface<br>Samples                        | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet   | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS  | Graphic Log      | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (100.8-<br>100.9')<br>VOCs<br>BF                      |                                 |             | -<br>-<br>101.0 | jointed, severe bioturbation with burrows filled by clay and rimmed with iron precipitate, little fine grained sized glauconite throughout as well as laminated beds, glauconite percentages as well as degree of iron staining increase with depth, well to moderately well cemented with clay and quartz,   |       | 1/2/12/12/       |              |     |                         |                     |         |                     |       |                  |
| (102-<br>102.1')<br>VOCs                              |                                 |             | -<br>- 102.0    | begins at ~100.1' bgs.  | is in | (2/2)            |              |     |                         |                     |         |                     |       |                  |
| (103.1-<br>103.2')<br>VOCs<br>BF<br>(102.6-<br>103.1) |                                 |             | — 103.0         | 100.7 - 101.9' SANDSTONE: Very pale brown (10 YR 7/4). Sand: 95%, very fine to medium grained, predominately fine grained, subangular to subrounded, Clay: 5%, sandstone is moderate to poorly sorted, moderately hard, fine grained, slightly weathered on the outside of the core as well as on the fracture faces, laminated to very thinly bedded, highly jointed, trace bioturbation with burrows filled by clay and very fine sand, moderately well cemented with quartz and clay, secondary mineralization of iron precipitate on open horizontal fractures, heavy iron precipitation and staining from oxidation from 100.8-101.2', healed hairline fractures are filled with clay and very fine sand as well as iron precipitate, open fractures are horizontal to shallow and are irregular and rough displaying in filling of clay and very fine sand as well as iron precipitate. |       | 1/2/12/12/12/12/ |              |     |                         | 11.4%               |         |                     | 22    |                  |
| PHYS<br>PROP  |                                 |             | - 104.0<br>-    | 101.9 - 103.1' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately fine grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, laminated and cross bedding, intensely jointed, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, trace iron oxidation on fracture faces, open fractures occur at bedding   |       | 1/2/1/2/12/      |              |     |                         |                     |         |                     |       |                  |

| Sam                               |                                 |             |               |  |      |             |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|-----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                   | 4.8'                            |             | -             | planes and are horizontal and smooth displaying infilling of clay and very fine sand.  Physical Properties Sample  |      |             |              | 4.3<br>ppm | -                       |                     |                 |                     | 5     | 45%<br>Poor      |
| (105.1-<br>105.2')<br>VOCs<br>BF  |                                 |             | - 105.0<br>-  | 103.7 - 104.2'   |      |             |              |            |                         |                     |                 |                     |       |                  |
|                                   |                                 |             | -<br>- 106.0  | sand and clay, well cemented with quartz and clay, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth displaying infilling of clay and very fine sand.  104.6 - 109.4' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately fine grained, subrounded  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (106.4-<br>106.5')<br>VOCs<br>BF  |                                 |             | - 107.0       | to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, laminated and cross bedding, intensely jointed, more friable in strata that display greater degree of jointing, trace pores and pits throughout, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth displaying infilling of clay and very fine sand. |      |             |              |            |                         |                     | 27              |                     |       |                  |
| (107.5-<br>107.6')<br>VOCs<br>BF  |                                 |             | -             |  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (108.3-<br>108.4')<br>VOCs<br>BET |                                 |             | — 108.0       |  |      |             |              |            |                         |                     |                 |                     |       |                  |

|                                   | mlc T                        |             |                   |   |      | <u> </u>   |              |            | 1                       |                     | Call Do         | Pa<br>operties      | ige 23 | of 51            |
|-----------------------------------|------------------------------|-------------|-------------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. & Ferovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Graphic Log  | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (110.3-<br>110.4')<br>VOCs<br>AF  | 4.9'                         |             | - 110.0<br>       | are horizontal and smooth to semi-rough                             |      | مراحم احراب المراب المراحم المراجم المراحم الم |              | 3.7<br>ppm |                         |                     |                 |                     |        | 43.3%<br>Poor    |
| (111.5-<br>111.6')<br>VOCs<br>AF  |                              |             | -<br>-<br>- 112.0 | displaying infilling of clay and very fine sand.                    |      | 12/12/12/12/14/  |              |            |                         |                     |                 |                     |        |                  |
| (112.1-<br>112.2')<br>VOCs<br>BET |                              |             | -                 |   |      |  |              |            |                         |                     |                 |                     |        |                  |
| (112.9-<br>113')<br>VOCs<br>BF    |                              |             | - 113.0<br>-      |   |      |  |              |            |                         |                     |                 |                     |        |                  |

| Samj  |                                 |             |                               | <u> </u>  |      |  |              |            |                         |                     | Soil Pr         | operties            |       | of 51            |
|---|---------------------------------|-------------|-------------------------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples                              | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                 | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log  | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (114.6-<br>114.7')<br>VOCs<br>BF<br>(115.6')<br>VOCs<br>BET | 4.9'                            |             | - 114.0<br>- 115.0<br>- 116.0 | 114.6 - 119.5' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and display cross bedding (~20 degrees), highly jointed, semi-friable in strata that display a greater degree of fracturing, trace pores and pits throughout, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace iron oxidation on fracture faces, trace high angle fractures, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand. |      | The test of the te |              | 6.1<br>ppm |                         |                     |                 |                     |       | 50%<br>Fair      |
| (116.9-<br>117')<br>VOCs<br>BF                              |                                 |             | - 117.0                       |   |      | 4/2/2/2/2/2/2/   |              |            |                         |                     |                 |                     |       |                  |

| Sam                               | ple                             |             |               |  |      |             |              |            |                         |                     | Soil Pr         | operties            | ge 25 | 0131             |
|-----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (118.1-<br>118.2')<br>VOCs<br>BF  |                                 |             | - 118.0<br>-  |  |      |             |              |            |                         |                     |                 |                     |       |                  |
|                                   |                                 |             | - 119.0       | 27   |      |             |              |            |                         |                     |                 |                     |       |                  |
| (119.6-<br>119.7')<br>VOCs<br>BET | 4.8'                            |             | - 120.0       | 119.6 - 121.4' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and also display shallow angle cross bedding, highly jointed, semi-friable in strata that display   |      |             |              | 4.9<br>ppm |                         |                     |                 |                     |       | 43.3%<br>Poor    |
| (120.9-<br>121')<br>VOCs<br>BET   |                                 |             | -<br>- 121.0  | a greater degree of fracturing, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, trace iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand as well as iron precipitate, sandstone changes color from a light grey to a more pale green sand from 120.7-121.4' |      |             |              |            |                         |                     |                 |                     |       |                  |
| (120.9-<br>121.4)<br>PHYS<br>PROP | i                               |             | -             | Physical Properties Sample   |      |             | 32,4332      |            |                         | 11.3%               |                 |                     |       |                  |
| (121.9-<br>122')<br>VOCs<br>BF    |                                 |             | - 122.0       | 121.8 - 124.4' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%,  |      |             |              |            |                         |                     |                 | 72                  |       |                  |

| Samp                             |                                 |             |                    | ·   |      |             |              |            |                         |                     | Soil Pro | perties             |       |                  |
|----------------------------------|---------------------------------|-------------|--------------------|---|------|-------------|--------------|------------|-------------------------|---------------------|----------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid   | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (122.7-<br>122.8')<br>VOCs<br>BF |                                 |             | - 123.0<br>- 124.0 | sandstone is moderately well sorted, moderately hard to hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and also display shallow angle cross bedding, highly jointed, semi-friable in strata that display a greater degree of fracturing, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, trace iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand as well as iron precipitate. |      |             |              |            |                         |                     |          |                     |       |                  |
| (124.7-<br>124.8')<br>VOCs<br>BF | 4.8'                            |             | - 125.0<br>-       | 124.6 - 222.1' Elk Mound Group Wonewoc Formation: Galesville Member Sandstone: Fine to medium grained, soft to moderately hard, poorly to well cemented, friable, highly jointed, joints are horizontal at bedding planes, trace high angle hairline vertical fractures, planar to cross bedding, laminated to very thin beds, little to some iron staining at bedding planes, trace to little glauconite in beds, trace bioturbation in filled with clay and silt with iron staining at rim, low to moderate energy nearshore environment.   |      |             |              | 2.0<br>ppm |                         |                     |          |                     |       | 50%<br>Fair      |
| (125.7-<br>125.8')<br>VOCs<br>BF |                                 |             | - 126.0            | 124.6 - 129.4' SANDSTONE: Light grey (10 YR 7/2). Sand: 90%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay: 10%, sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, moderate weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, friable near fracture faces in strata that display a greater degree of fracturing,  |      |             |              |            |                         |                     |          |                     |       |                  |

| г     |                                 | ,                               |             |               |   | I    |             |              |            |                         |                     | G '1 B          |                     | ige 27 i |                       |
|-------|---------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|----------|-----------------------|
| -     | Sam                             |                                 |             | 4             |   |      |             |              |            |                         |                     | Soil Pr         | operties            |          |                       |
|       | Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200    | RQD/<br>Comments      |
| -   3 | 126.7-<br>126.8')<br>VOCs<br>AF |                                 |             | — 127.0       | moderately well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semirough displaying infilling of clay and very fine sand as well as iron precipitate. |      |             |              |            |                         |                     |                 |                     |          |                       |
| -     | 127.5-<br>127.6')<br>VOCs<br>f5 | 12                              |             | -<br>- 128.0  |   |      |             |              |            |                         |                     |                 |                     |          |                       |
| 1     | 128.4-<br>128.5')<br>VOCs<br>AF |                                 |             | - 129.0       |   |      |             |              |            |                         |                     |                 |                     |          |                       |
| 1     | (130-<br>(30.1')<br>VOCs<br>BF  | 5.0'                            |             | - 130.0       | hard, mostly moderately hard, fine grained, moderate weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, friable near fracture faces in strata that display a greater degree of fracturing, moderately well cemented with quartz  |      |             |              | 3.8<br>ppm |                         |                     |                 |                     |          | 11.7%<br>Very<br>Poor |
|       | 130.8-<br>(30.9')               |                                 |             |               | and clay, trace bioturbation where<br>burrows are filled with clay and very fine<br>sand and rimmed with iron precipitate,<br>sandstone displays bands of oxidized<br>iron staining that follow bedding planes,   |      |             | 100 X 20 X   |            |                         |                     |                 |                     |          |                       |

| Sam                              | nple                            |             |               |  |      |             |              |            |                         |                     | Soil Pro        | operties            |       |                       |
|----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|-----------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments      |
| VOCs<br>BF                       |                                 |             | - 131.0<br>-  | little horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal to shallow and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate.                            |      |             |              |            | :                       |                     |                 |                     |       |                       |
| (131.9-<br>132')<br>VOCs<br>BET  |                                 |             | - 132.0       |  |      |             |              |            |                         |                     |                 |                     |       |                       |
| (132.7-<br>132.8')<br>VOCs<br>BF |                                 |             | _<br>_ 133.0  |  |      |             |              |            |                         | Ē                   |                 |                     |       |                       |
| (133.3-<br>133.4')<br>VOCs<br>AF |                                 |             | -<br>- 134.0  |  |      |             |              |            |                         |                     |                 |                     |       |                       |
| (135.2-<br>135.3')               | 4.9'                            |             | - 135.0       | 134.6 - 139.5' SANDSTONE: Very pale brown (10 YR 8/3). Sand: 95%, very fine to medium grained, predominately medium grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering on outside of core, severe weathering on the fracture faces, beds are horizontally laminated to very thinly bedded and also |      |             |              | 4.2<br>ppm |                         |                     |                 |                     |       | 18.3%<br>Very<br>Poor |

| Sam                              |                                 |             |               |   |      |             |              |            |                         |                     | Soil Pr         | operties            | ige 29 | 21 21            |
|----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| VOCs<br>BF<br>(136.4-<br>136.5') |                                 |             | -<br>- 136.0  | display shallow angle cross bedding, highly jointed, semi-friable near fracture faces in strata that display a greater degree of fracturing, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures are filled with clay and iron precipitate, open fractures occur at bedding planes and are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate, increasing iron concentration with depth. |      |             |              |            |                         |                     |                 |                     |        |                  |
| VOCs<br>BET                      |                                 |             | - 137.0       |   |      |             |              |            |                         |                     |                 |                     |        |                  |
| (137.8-<br>137.9')<br>VOCs<br>BF |                                 |             | 138.0         | e e   |      |             |              |            |                         |                     |                 |                     |        |                  |
|                                  |                                 |             | _ 139.0       |   | 14   |             |              |            |                         |                     |                 |                     |        |                  |
|                                  | 5.1'                            |             |               | 139.6 - 142.4'<br>SANDSTONE: Very pale brown (10 YR   |      |             | 2002         | 5.3<br>ppm |                         |                     |                 |                     |        | 44%<br>Poor      |

| Sample  |             |               | ,   |      |             |              | -   |                         |                     | Soil Pr         | operties            | 3     | ]                |
|---|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture Surface Samples Length Att. & Recovered (in)   | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (139.9-<br>140')<br>VOCs<br>BF                          |             | - 140.0<br>-  | 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly jointed, very well cemented with quartz and iron  |      |             |              |     |                         |                     |                 |                     |       |                  |
| (141.3-<br>141.4')<br>VOCs<br>BF                        |             | - 141.0       | precipitate, little pores and pits throughout, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, trace medium grained oxidized iron nodules throughout that fill pores and pits, healed borizontal bailline fractures.   |      |             |              |     |                         |                     |                 |                     |       |                  |
| (141.8-<br>142.3)<br>PHYS<br>PROP<br>(142.3-<br>142.4') |             | — 142.0<br>-  |   |      |             |              |     |                         |                     |                 |                     |       |                  |
| VOCs<br>BET   |             |               | Physical Properties Sample  |      |             | 222          |     |                         | 10.3%               |                 | į                   |       |                  |
| (143-<br>143.1')<br>VOCS<br>BF                          | 7/.         | - 143.0<br>-  | SANDSTONE: Very pale brown (10 YR 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly jointed, very well cemented with quartz and iron precipitate, little pores and pits throughout, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, trace medium grained oxidized iron nodules throughout that fill pores and pits, healed horizontal hairline fractures |      |             |              |     |                         | =                   |                 |                     |       |                  |

| Sam                               |                                 |             | <u> </u>      |  |      |             |              |            |                         |                     | Soil Pr         | operties            |       |                      |
|-----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|----------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments     |
|                                   |                                 |             |               | planes where there are shale partings or healed iron filled hairline fractures, fractures are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate, increasing iron concentration with depth.   |      |             |              |            |                         |                     |                 | 17                  |       |                      |
| (144.8-<br>144.9')<br>VOCs<br>BF  | 4.0'                            |             | - 145.0       | 144.6 - 148.6' SANDSTONE: Very pale brown (10 YR 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard to soft with increasing depth, fine grained, slight to moderate weathering as depth increases, friability increases with depth, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely jointed, moderately well to poor cementation with quartz and iron precipitate, trace pores and pits |      |             |              | 2.8<br>ppm |                         |                     |                 |                     |       | 6.7%<br>Very<br>Poor |
| (146.1-<br>146.2')<br>VOCs<br>BET |                                 |             | - 146.0<br>-  | throughout, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, trace medium grained oxidized iron.   |      |             |              |            |                         |                     |                 |                     |       |                      |
| (147.1-<br>(147.2')<br>VOCs<br>AF |                                 |             | - 147.0<br>-  |  | # 1  |             |              |            |                         |                     |                 |                     |       |                      |
|                                   |                                 |             | - 148.0<br>-  |  |      |             |              |            |                         |                     |                 |                     |       |                      |

|                                     |                                 |             |                   |  |      |             |              |            | -                       |                     |                 |                     | ige 32 | 0131             |
|-------------------------------------|---------------------------------|-------------|-------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Samp                                |                                 |             |                   |  |      |             |              |            |                         |                     | Soil Pr         | operties            |        |                  |
| Fracture<br>Surface<br>Samples      | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
|                                     |                                 |             | -<br>- 149.0<br>- | 149.6 – 150.4' SANDSTONE: Very pale brown (10 YR 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering, friable, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely jointed, moderately well to poor   |      |             |              |            |                         |                     |                 |                     |        |                  |
| 149.6-<br>(49.7')<br>VOCs<br>BET    | 4.6'                            |             | -<br>- 150.0      | cementation with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, trace medium grained oxidized iron nodules throughout that fill pores and pits, fractures are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate.  |      |             |              | 4.9<br>ppm |                         |                     |                 |                     |        | 28.3%<br>Poor    |
| (151-<br>  51.1')<br>  VOCs<br>  BF |                                 |             | — 151.0           | 150.4 - 150.8' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated, highly jointed, friable near fractures, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand.  |      |             |              |            |                         |                     |                 |                     |        |                  |
| (152-<br> 52.1')<br>VOCs<br>BF      |                                 |             | - 152.0           | 150.8 - 152.4' SANDSTONE: Very pale brown (10 YR 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering, friable near beds of shale, beds are horizontally laminated to very thinly bedded, intensely jointed, moderately well to poor cementation with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, fractures are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and | •    |             |              |            |                         |                     |                 |                     |        |                  |

|                                  |                                   |             |                              | · · · · · ·  |      |             |              |            |                         |                     | a == |                     | ige 33 | of 51                |
|----------------------------------|-----------------------------------|-------------|------------------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|------|---------------------|--------|----------------------|
| Fracture<br>Surface<br>Samples   | Length Att. & a<br>Recovered (in) | Blow Counts | Depth in Feet                | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content |      | Placticity do Index | P 200  | RQD/<br>Comments     |
| (153.4-<br>153.5')<br>VOCs<br>BF |                                   |             | - 153.0<br>-<br>-<br>- 154.0 | mineralization of iron precipitate.  152.4 - 152.8' SANDSTONE: Light grey (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated, highly jointed, friable near fractures, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand.   |      |             |              |            |                         |                     |      |                     |        |                      |
| (154.7-<br>154.8')<br>VOCs<br>BF | 3.7'                              |             | — 155.0<br>-                 | SANDSTONE: Very pale brown (10 YR 8/3) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering, friable near beds of shale, beds are horizontally laminated to very thinly bedded, intensely jointed, moderately well to poor cementation with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, fractures are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate.                |      |             |              | 3.3<br>ppm |                         |                     |      |                     |        | 8.3%<br>Very<br>Poor |
| 156.1-<br>156.2')<br>VOCs<br>BF  |                                   |             | - 156.0<br>-<br>-<br>- 157.0 | 154.6 - 156.5' SANDSTONE: Brownish yellow (10 YR 6/6) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering, friable near beds of shale, beds are horizontally laminated to very thinly bedded, intensely jointed, moderately well to poor cementation with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, fractures are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate. |      |             |              |            |                         |                     |      |                     |        |                      |
| (157.2-<br>157.3')               |                                   |             | -                            | 156.5 - 158.3'<br>SANDSTONE: Red (2.5 YR 4/6) to<br>Yellowish Brown (10 YR 5/8). Sand:<br>90%, very fine to medium grained,  |      |             | \$45.500 P   |            |                         |                     |      |                     |        |                      |

|   | 1-                              |             |               | 1  | 1    |             |              |            |                         | · ·                 | <u> </u> |                     | age 34 | 01 51            |
|---|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|----------|---------------------|--------|------------------|
| San   | nple<br>ਕ                       |             | ±:            |  |      |             |              |            |                         |                     | Soil Pr  | operties            | -      |                  |
| Fracture<br>Surface<br>Samples                                    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid   | Placticity<br>Index | P 200  | RQD/<br>Comments |
| VOCs<br>AF  |                                 |             | - 158.0       | predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to soft, fine grained, moderate weathering, friable in strata that display greater percentages of fractures, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely jointed, moderately well to poorly cemented with iron precipitate and iron, sandstone is heavily oxidized with iron staining, healed hairline fractures are filled with iron precipitate, fractures are horizontal to shallow in attitude and are irregular and smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate.                 |      |             |              |            |                         |                     |          |                     |        |                  |
|   |                                 |             | — 159.0<br>_  | 159.6 -160.3'   SANDSTONE: Red (2.5 YR 4/6) to   Yellowish Brown (10 YR 5/8). Sand: 90%, very fine to medium grained,   predominately medium grained,   subrounded to rounded, clay and iron   precipitate: 10%, sandstone is   moderately well sorted, moderately hard to soft, fine grained, moderate   weathering, friable in strata that display greater percentages of fractures, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely jointed, moderately   |      |             |              |            |                         |                     |          |                     |        |                  |
| (160-<br>160.1')<br>VOCs<br>BF                                    | 4.1'                            |             | - 160.0       | well to poorly cemented with iron precipitate and iron, sandstone is heavily oxidized with iron staining, healed hairline fractures are filled with iron precipitate, sandstone displays bands of heavier oxidized iron staining that follow   |      |             |              | 1.8<br>ppm |                         |                     |          |                     |        | 36.7%<br>Poor    |
| (159.6-<br>160)<br>PHYS<br>PROP<br>(161-<br>161.1')<br>VOCs<br>BF |                                 |             | — 161:0       | Physical Properties Sample  160.7 - 161.9' SANDSTONE: Brownish yellow (10 YR 6/6) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, slight weathering, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, well cemented with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, trace medium grained oxidized iron nodules throughout that fill pores and pits, fractures are horizontal to shallow in attitude and are smooth |      |             |              | A.2        |                         | 13.8%               |          |                     |        |                  |

| Sam                              |                                 |             |                    |  |      |             |              |            |                         |                     | Soil Pr | operties            |       |                  |
|----------------------------------|---------------------------------|-------------|--------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|---------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit  | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (161.0                           |                                 |             |                    | displaying infilling of very fine sand as well as secondary mineralization of iron precipitate.  |      |             | S (2)        |            |                         |                     |         |                     |       |                  |
| (161.9-<br>162')<br>VOCs<br>BF   |                                 |             | - 162.0<br>- 163.0 | 161.9 - 164.1' SANDSTONE: Red (2.5 YR 4/6) to Yellowish Brown (10 YR 5/8). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderatele weathering, semi-friable at fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, moderately well cernented with iron precipitate and quartz, sandstone is heavily oxidized with iron staining, healed hairline fractures are filled with iron precipitate, sandstone displays bands of heavier oxidized iron staining that follow bedding planes, fractures are horizontal to shallow in attitude and are irregular and smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate. |      |             |              |            |                         |                     |         |                     |       |                  |
| (164.4-                          |                                 |             | - 164.0<br>-       | 8  |      |             |              |            |                         |                     |         |                     |       |                  |
| 164.5')<br>VOCs<br>BF            | 4.7'                            |             | _                  | 164.6 - 169.3'<br>SANDSTONE: Red (2.5 YR 4/6) to   |      |             |              | 2.9<br>ppm |                         |                     |         |                     |       | 43.3%<br>Poor    |
|                                  |                                 |             | — 165.0<br>-       | moderately well sorted, moderately hard to hard, fine grained, moderate weathering, semi-friable at fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, little pores and pits throughout, moderately well cemented with iron precipitate and quartz, sandstone is   |      |             |              |            |                         |                     |         |                     |       |                  |
| (165.6-<br>165.7')<br>VOCs<br>BF |                                 |             | -<br>- 166.0       | heavily oxidized with iron staining, healed<br>hairline fractures are filled with iron<br>precipitate, sandstone displays bands of<br>heavier oxidized iron staining that follow<br>bedding planes, fractures are horizontal<br>to shallow in attitude and are irregular   |      |             |              |            |                         |                     |         |                     |       |                  |

| Sam                               |                                 |             |                   |   | <u> </u> |             |              |            |                         |          | Soil Pr | operties            |       |                  |
|-----------------------------------|---------------------------------|-------------|-------------------|---|----------|-------------|--------------|------------|-------------------------|----------|---------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | uscs     | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                   |                                 |             | -                 | mineralization of iron precipitate.   |          |             | 2,525,53     |            |                         |          |         |                     |       | 1                |
| (166.6-<br>166.7')<br>VOCs<br>BET |                                 |             | -                 |   |          |             |              |            |                         |          |         |                     |       |                  |
| (407.5                            |                                 |             | - 167.0           |   |          |             |              |            |                         |          | :       |                     |       |                  |
| (167.5-<br>167.6')<br>VOCs<br>BF  |                                 |             | 168.0             |   |          |             |              |            |                         |          |         |                     |       |                  |
|                                   |                                 |             | -                 |   |          |             |              |            |                         |          |         |                     |       |                  |
|                                   |                                 |             | -<br>-<br>- 169.0 | \[ 169.6 - 170.6 \]   |          |             |              |            |                         |          |         |                     |       |                  |
|                                   |                                 |             | - 1               | SANDSTONE: Red (2.5 YR 4/6) to Yellowish Brown (10 YR 5/8). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate                 |          |             |              |            |                         |          |         | ,                   |       |                  |
| (169.9-<br>170')                  | 5.1'                            |             | <b>–</b> 170.0    | 3,  |          |             |              | 4.0<br>ppm |                         | ki .     |         |                     |       | 65%<br>Fiar      |
| VOCs<br>AF                        |                                 |             |                   | hairline fractures are filled with iron precipitate, sandstone displays bands of heavier oxidized iron staining that follow bedding planes, fractures are horizontal to shallow in attitude and are irregular and smooth displaying infilling of clay and very fine sand as well as secondary |          |             |              |            |                         |          |         |                     |       |                  |

| Sam                               |                                 |             |                   | 181   |      |             |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|-----------------------------------|---------------------------------|-------------|-------------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (170.8-<br>(170.9')<br>VOCs<br>BF |                                 |             | -<br>- 171.0      | 5%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding,  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (171.6-<br>171.7')<br>VOCs<br>f6  |                                 |             | -<br>-<br>- 172.0 | intensely to highly jointed, well cemented with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, healed hairline fractured fractures are filled with iron precipitate, fractures are horizontal to shallow in attitude and are smooth displaying infilling of very fine sand as well as secondary mineralization of iron precipitate. |      |             |              |            |                         |                     |                 |                     |       |                  |
| (172.5-<br>172.6')<br>VOCs<br>BF  |                                 |             |                   | 173.3 - 174.2' SANDSTONE: Red (2.5 YR 4/6) to Yellowish Brown (10 YR 5/8). Sand: 90%, very fine to medium grained, predominately medium grained.  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (173.1-<br>(173.2')<br>VOCs<br>BF |                                 |             | - 173.0<br>-<br>- | moderately well sorted, moderately hard to hard, fine grained, moderately weathering, semi-friable at fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, little pores and pits throughout, moderately well cemented with iron precipitate and quartz, sandstone is heavily oxidized with iron staining, healed hairline fractures are filled with iron  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (174.4-<br>174.5')                |                                 |             | -<br>- 174.0      | and very fine sand as well as secondary mineralization of iron precipitate.  174.2 - 174.6' SANDSTONE: Brownish yellow (10 YR   |      |             |              |            |                         |                     |                 |                     |       |                  |
| VOCs<br>BF                        | 4.5'                            |             |                   | 6/6) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding,   |      |             |              | 7.1<br>ppm |                         |                     |                 |                     | 5     | 30%<br>Poor      |

| Sample   |             |                    |   |      | <u> </u>    |              |     | 1                       |                     | Coll De         | Pa<br>perties    | ige 38 | of 51            |
|--|-------------|--------------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|------------------|--------|------------------|
| Fracture Surface Samples Length Att. & a                         | Blow Counts | Depth in Feet      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity Index | P 200  | RQD/<br>Comments |
|  |             | - 175.0<br>-       | intensely to highly jointed, well cemented with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, healed hairline fractured fractures are filled with iron precipitate, fractures are horizontal to shallow in attitude and are smooth displaying infilling of very fine sand as well as secondary mineralization of iron precipitate.   |      |             |              |     |                         |                     |                 |                  |        |                  |
| 175.9-<br>176')<br>VOCs<br>AF<br>176.7-<br>176.8')<br>VOCs<br>BF |             | - 176.0            | 174.6 - 176.9' SANDSTONE: Brownish yellow (10 YR 6/6) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, well cemented with quartz, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, fractures are horizontal to shallow in attitude and are smooth displaying infilling of very fine sand as well as secondary mineralization of iron precipitate. |      |             |              |     |                         |                     |                 |                  |        |                  |
| 177.2-<br>(177.3')<br>VOCs<br>BF                                 |             | - 177.0<br>- 178.0 | SANDSTONE: Red (2.5 YR 4/6) to Yellowish Brown (10 YR 5/8). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering, semi-friable at fracture faces, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, little pores and pits throughout, moderately well cemented with iron precipitate and quartz, sandstone is  | 15   |             |              |     |                         |                     |                 |                  |        |                  |
|  |             | -<br>- 179.0       | 178.2 - 179.1' SANDSTONE: Brownish yellow (10 YR 6/6) to white (10 YR 8/1). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely to highly jointed, well cemented   |      |             |              |     |                         |                     |                 |                  |        |                  |

| Sam                               |                                 | _           |               |  |      |             |              |             |                         |                     | Soil Pr | operties            | _     |                      |
|-----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|-------------|-------------------------|---------------------|---------|---------------------|-------|----------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments     |
|                                   |                                 |             |               | with quartz, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, fractures are horizontal to shallow in attitude and are smooth displaying infilling of very fine sand as well as secondary mineralization of iron precipitate.  |      |             |              |             | i.                      |                     |         |                     |       |                      |
| (180.7-<br>180.8')<br>VOCs<br>BET | 3.2'                            |             | 180.0         | 180.0 - 183.0' SANDSTONE: Brownish yellow (10 YR 6/8) to yellowish brown (10 YR 5/8). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is moderately sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, laminated to very thin horizontal and cross beds, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              | 1.53<br>ppm |                         |                     |         |                     |       | 8.3%<br>Very<br>Poor |
| (181.7-<br>181.8')<br>VOCs<br>BET | ,                               |             | - 182.0<br>-  |  |      |             |              |             |                         |                     |         |                     |       |                      |
| VOCS<br>BET                       |                                 |             | - 183.0       |  |      |             |              |             |                         |                     |         |                     |       |                      |

| Sam                               |                                 |             |               | <u></u>  |      |             |              |             |                         |                     | Soil Pr         | operties            |       |                  |
|-----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|-------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | nscs | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                   |                                 |             | 184.0         |  |      |             |              | า           |                         |                     |                 |                     |       |                  |
| (184.5-<br>184.6')<br>VOCs<br>AF  | 4.2'                            |             | - 185.0       | 184.0 - 187.3' SANDSTONE: Brownish yellow (10 YR 6/8) to yellowish brown (10 YR 5/8). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is moderately sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, laminated to very thin horizontal and cross beds, bedding planes become less apparent and abundant with depth, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to moderately dipping in attitude, fractures are predominately horizontal to shallow, fractures range from tight to open, predominately tight, fracture faces are |      |             |              | 10.2<br>ppm |                         |                     |                 |                     |       | 28.3% : Poor     |
| (185.6-<br>185.7')<br>VOCs<br>AF  |                                 |             | -<br>186.0    | smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.   |      |             |              |             |                         |                     |                 |                     |       |                  |
| (186.4-<br>186.5')<br>VOCs<br>BF  |                                 |             |               | ¥  |      |             |              |             |                         |                     |                 |                     |       |                  |
| (187.1-<br>187.2')<br>VOCs<br>BET |                                 |             | - 187.0       |  |      |             |              |             |                         |                     |                 |                     |       |                  |
| (187.3-<br>187.8)<br>PHYS<br>PROP |                                 |             | -<br>- 188.0  | Physical Properties Sample  187.8 - 188.2' SANDSTONE: Yellow (2.5 Y 7/8). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to thinly  |      |             |              |             |                         | 13.0%               |                 |                     |       |                  |

| Samı                              | ple                          |             |               |  | Γ    | <del>                                     </del> |   |            |                         |                     | Soil P | roperties | age 41 | 01 21            |
|-----------------------------------|------------------------------|-------------|---------------|--|------|--|---|------------|-------------------------|---------------------|--------|-----------|--------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                                      | Well Diagram                            | FID        | Compressive<br>Strength | Moisture<br>Content |        | ity       | P 200  | RQD/<br>Comments |
|                                   | 4.8'                         |             | 189.0         | bedded and trace laminated cross beds, bedding planes become less apparent and abundant with depth, sandstone displays trace bands of oxidized iron staining and follow bedding planes, highly to intensely jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately open, vertical healed hairline fractures are visible on fracture faces and are filled with iron oxidized clay, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  189.0 - 193.9' SANDSTONE: Yellow (2.5 Y 7/8). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded |      |  |   | 7.2<br>ppm |                         |                     |        |           |        | 63.6%<br>Fair    |
| (189.7-<br>189.8')<br>VOCs<br>AF  |                              |             | - 190.0<br>-  | to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to thinly bedded and trace laminated cross beds, bedding planes become less apparent and abundant with depth, sandstone displays trace bands of oxidized iron staining that follow bedding planes, beds   |      |  | X                                       |            |                         |                     |        |           |        |                  |
| (190.4-<br>190.5')<br>VOCS<br>BET |                              |             | - 191.0       | are heavily stained and cemented iron and limonite stained at 192.4', highly jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  |      |  | T X X X X Y X Y X X X X X X X X X X X X |            |                         |                     |        |           |        |                  |
| (191.4-<br>191.5')<br>VOCs<br>AF  |                              |             | -<br>- 192.0  |  |      |  | Y XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  |            |                         |                     |        |           |        |                  |
| (192.4-<br>192.5')                |                              |             | -             |  | i i  |  |   |            |                         |                     |        |           |        | 10               |

| Sam                              |                                 |             |                   | •  |      |             |                                       |             |                         |                     | Soil Pr         | operties            | 150 42 |                  |
|----------------------------------|---------------------------------|-------------|-------------------|--|------|-------------|---------------------------------------|-------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram                          | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| VOCs<br>BF                       |                                 |             | -<br>-<br>- 193.0 |  | =    |             | X                                     |             |                         |                     |                 |                     |        |                  |
| (193.2-<br>193.3')<br>VOCs<br>BF |                                 |             | -                 |  |      |             |                                       |             |                         |                     |                 |                     |        |                  |
|                                  | 4.5'                            |             | 194.0             | 194.0 - 198.5'<br>SANDSTONE: Yellow (2.5 Y 7/8).<br>Sand: 95%, very fine to fine grained,  | -    |             |                                       | 9.68<br>ppm |                         |                     |                 |                     |        | 50%<br>Fair      |
| (195-<br>195.1')<br>VOCs<br>BF   |                                 |             | -<br>195.0        | predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to thinly bedded and trace laminated cross beds, sandstone displays trace bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely |      |             | N   N   N   N   N   N   N   N   N   N |             |                         |                     |                 |                     |        |                  |
| (195.8-<br>195.9')<br>VOCs<br>BF |                                 |             | - 196.0<br>-      |  |      |             | X                                     |             |                         |                     |                 |                     |        |                  |
| (196.8-<br>196.9')               |                                 |             | -                 |  |      |             | X                                     |             |                         |                     |                 |                     |        |                  |

| Sam                               |                                 | - ,         |                  | <u> </u>  |      |             |   |             |                         |                     | Soil Pr         | operties            |       |                  |
|-----------------------------------|---------------------------------|-------------|------------------|---|------|-------------|---|-------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet    | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log | Well Diagram                            | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| VOCs<br>AF                        |                                 |             | - 19 <b>7.</b> 0 |   |      |             | A A A A A A A A A A A A A A A A A A A   |             |                         |                     |                 |                     |       |                  |
| (197.4-<br>197.5')<br>VOCs<br>BET |                                 |             | - 198.0          |   |      |             |   |             |                         |                     |                 |                     |       |                  |
|                                   | 5.0'                            |             | 199.0            | 199.0 - 201.3' SANDSTONE: Yellow (2.5 Y 7/8). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron   |      |             |   | 2.27<br>ppm |                         |                     |                 |                     |       | 76.7%<br>Good    |
| (199.6-<br>199.7')<br>VOCs<br>BF  |                                 |             | - 200.0          | precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to thinly bedded and trace laminated cross beds, sandstone displays trace bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability |      |             | A X X X X X X X X X X X X X X X X X X X |             | . de-100                |                     |                 |                     |       |                  |
| (200.6-<br>200.7')<br>VOCs<br>BF  |                                 | R           | - 201.0          | and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.   |      |             | X X X X X X X X X X X X X X X X X X X   |             |                         |                     |                 |                     |       |                  |

| Sam                              |                                 |             |               |  |      |             |   |             |                         |                     | Soil Pro        | perties             |       |                  |
|----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|---|-------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | nscs | Graphic Log | Well Diagram  | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (202-<br>202.1')<br>VOCs<br>f6   |                                 |             | - 202.0       | 201.3 - 203.8' SANDSTONE: Pale yellow (2.5 Y 7/4). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint, oxidized iron staining that follow bedding planes, highly to intensely jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are horizontal and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |   |             |                         |                     |                 |                     |       |                  |
| 203.3-<br>203.4')<br>VOCs<br>BET |                                 |             | - 203.0       |  |      |             | K Y L X Y Y L X K K K K K K K K K K K K K K K K K K |             |                         |                     |                 |                     |       |                  |
| (205.2-<br>205.3')<br>VOCs<br>BF | 5.0'                            |             | - 205.0       | 204.0 - 208.2' SANDSTONE: Pale yellow (2.5 Y 7/4). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are horizontal and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  |      |             |   | 21.6<br>ppm |                         |                     |                 |                     |       | 50%<br>Fair      |

| Sam                               |                                 |             |               |   |      |             |              |     |                         |                     | Soil Pr         | operties            | ige 43 |                  |
|-----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (206.1-<br>206.2')<br>VOCs<br>BET |                                 |             | - 206.0       |   |      |             |              |     |                         |                     |                 |                     |        |                  |
| 207.1-<br>207.2')<br>VOCs<br>BF   |                                 |             | - 207.0       |   |      |             |              |     |                         |                     |                 |                     |        |                  |
| 207.8-<br>207.9')<br>VOCs<br>BF   |                                 |             | -<br>- 208.0  |   |      |             |              |     |                         | 44.70/              |                 |                     |        |                  |
| (208.2-<br>208.7)<br>PHYS<br>PROP |                                 | -           | -             | Physical Properties Sample  208.7 - 208.9' SANDSTONE: Pale yellow (2.5 Y 7/4). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces,   |      |             |              |     | į                       | 14.7%               |                 |                     |        |                  |
| )                                 | 0.0                             |             | 209.0         | bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are horizontal and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              | NM  |                         |                     |                 |                     |        | NA               |
|                                   |                                 |             | - 210.0       | 208.9 - 209.0' SANDSTONE: Pale yellow (2.5 Y 7/4). Sand: 70%, very fine to fine grained, predominately fine grained, subrounded   |      |             |              |     |                         |                     |                 |                     |        |                  |

| Sam                            | mle          |             |                   |  |      |             |   |             |                         |                     | Soil De | operties | ge 46 | 01 51         |
|--------------------------------|--------------|-------------|-------------------|--|------|-------------|---|-------------|-------------------------|---------------------|---------|----------|-------|---------------|
| Fracture<br>Surface<br>Samples | r. &<br>(in) | Blow Counts | Depth in Feet     | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram                              | FID         | Compressive<br>Strength | Moisture<br>Content |         | ity      | P 200 | RQD. Comments |
|                                |              |             | - 211.0           | to rounded, Clay and silt: 30%, sandstone is poorly sorted, poorly cemented with quartz and clay, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, alternating horizontally laminated beds of clay and sandy silt with fine grained subrounded white sand, intensely jointed, fractures occur at bedding planes and are horizontal in attitude, fractures are tight and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  No Recovery. |      |             |   |             |                         |                     |         |          |       |               |
|                                |              |             | -<br>- 212.0<br>- |  |      |             |   |             |                         | 8                   |         |          |       |               |
|                                |              |             | -<br>- 213.0      |  |      |             |   |             |                         |                     |         |          |       |               |
| (214.4-<br>214.5')             | 3.9'         |             | -<br>- 214.0<br>- | 214.0 - 217.7'  SANDSTONE: Pale yellow (2.5 Y 7/3). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz   |      |             | Manadagagagagagagagagagagagagagagagagagag | 5.85<br>ppm |                         |                     |         |          |       | 35%<br>Poor   |

| Samp                             |                                 | $\neg \uparrow$ |               |   | _    | ·           |              |     |                         |                     | Soil Pr         | operties            |       |                  |
|----------------------------------|---------------------------------|-----------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts     | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| VOCs<br>BF                       |                                 | -               | - 215.0       | cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, trace pores to pits throughout, trace pits are filled with iron nodules and have iron staining/precipitation rimming the pits, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures are filled with iron precipitate, fractures range from tight to open, predominately tight, fracture faces are horizontal and smooth due to friability and display secondary mineralization of iron precipitate and in |      |             |              |     |                         |                     |                 |                     |       |                  |
| 215.7-<br>215.8')<br>VOCs<br>AF  |                                 | -               | - 216.0       | filling of clay and very fine sand.   |      |             |              |     |                         |                     |                 |                     |       |                  |
| 216.5-<br>216.6')<br>VOCs<br>BET |                                 | -               | - 217.0       |   |      |             |              |     |                         |                     |                 |                     |       |                  |
| 217.2-<br>217.3')<br>VOCs<br>BET |                                 | -               | - 218.0       |   |      |             |              |     |                         |                     |                 |                     |       |                  |

| Sam                              | ple                          |             |               | <u> </u>  |      |             |              |      | <u> </u>                |                     | Soil Pr | operties            | ge 48 |                  |
|----------------------------------|------------------------------|-------------|---------------|---|------|-------------|--------------|------|-------------------------|---------------------|---------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log | Well Diagram | FID  | Compressive<br>Strength | Moisture<br>Content |         | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                  | 3.9'                         |             | 219.0         | 219.0 - 222.1'  |      |             |              | 4.12 |                         |                     |         |                     |       | 33.3%            |
| (219.6-<br>219.7')<br>VOCs<br>BF |                              |             | - 220.0       | SANDSTONE: Pale yellow (2.5 Y 7/3). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely jointed, |      |             |              | ppm  |                         |                     |         | ,                   |       | Poor             |
| 220.6-<br>220.7')<br>VOCs<br>BF  |                              |             | - 221.0<br>   |   |      |             |              |      |                         |                     |         |                     |       |                  |
| (221.6-<br>221.7')<br>VOCs<br>AF |                              |             | _ 222.0       | 222.1 - EOB Elk Mound Group Eau Claire Formation  Sandstone: very fine to fine grained, subround grains, moderately hard, moderately cemented, semi-friable, highly to intensely jointed, joints are horizontal to low angle (up to 25o), planar to cross bedding, laminated to very thin beds, clay in beds up to 0.5", trace bioturbation, trace pores to vugs with secondary mineralization and clay, low to moderate energy nearshore environment.  |      |             |              |      |                         |                     |         |                     |       |                  |
| (222.5-<br>222.6')<br>VOCs<br>BF |                              |             | - 223.0       | 222.1 - 222.8' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is very well sorted, moderately cemented with quartz cement, semi-friable and soft, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, some bioturbation  |      |             |              |      |                         |                     |         |                     |       |                  |

| Sam  | ple                             |             |               |   |      |  |              | _          |                         |                     | Soil Pro        | perties             |       |                  |
|--|---------------------------------|-------------|---------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log                            | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|  |                                 |             | -             | where burrows are filled with a bluish-<br>grey very fine grained silty sand and clay,<br>highly to intensely jointed, predominately<br>highly jointed, fractures occur at bedding<br>planes and are horizontal to shallow in<br>attitude, fractures range from tight to<br>open, predominately tight, fracture faces<br>are horizontal to irregular and are smooth<br>due to friability and display in filling of<br>clay and very fine sand.  |      | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |              |            |                         |                     |                 |                     |       |                  |
|  | 4.6'                            |             | - 224.0       | 224.0 - 225.1' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is very well sorted, moderately cemented with quartz cement, semi-friable and soft, fine grained, very slight weathering on the outside of the core as well as on the  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              | 4.7<br>ppm |                         |                     |                 |                     |       | 36.7%<br>Poor    |
| (224.6-<br>224.7')<br>VOCs<br>BET<br>(225.1-<br>225.6)<br>PHYS<br>PROP |                                 | 0           | - 225.0       | fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, some bioturbation where burrows are filled with a bluishgrey very fine grained silty sand and clay, highly to intensely jointed, predominately highly jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are horizontal to irregular and are smooth due to friability and display in filling of clay and very fine sand. |      |  |              |            |                         | 16.5%               |                 |                     |       |                  |
| (225.9-<br>226')<br>VOCs<br>BF   |                                 |             | - 226.0       | Physical Properties Sample  225.6 - 228.6' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is well sorted, moderately cemented with quartz cement, semi-friable and soft, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, little horizontal to shallow angle laminated partings of pale                       |      |  |              |            |                         |                     | k2              |                     |       |                  |
| (227-<br>227.1')<br>VOCs<br>BF   |                                 |             | - 227.0       | green shale that follow bedding planes, little bioturbation where burrows are filled with a bluish-grey very fine grained silty sand and clay, highly to intensely jointed, predominately highly jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures  |      |  |              |            |                         |                     | #11             | ě                   |       |                  |

| Sam                              |                                 | _           |               |   |      | _           |              |                 |                         |                     | Soil Pro        | operties            |       | i                |
|----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID             | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| 228.3-<br>228.4')<br>VOCs        | 1                               |             | - 228.0<br>-  |   |      |             |              |                 |                         |                     |                 | 7                   |       |                  |
| BET                              | 3.0'                            |             | 229.0         | 229.0 - 231.9' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is well  |      |             |              | 3.58<br>ppm     |                         |                     |                 |                     |       | 30.6%<br>Poor    |
| 229.5-<br>229.6')<br>VOCs<br>AF  | ****                            |             | - 230.0       | sorted, moderately hard, moderately well cemented with clay and quartz cement, semi-friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, little horizontal to shallow angle laminated partings of pale green shale that follow bedding planes, little bioturbation where burrows are filled with a bluish-grey very fine grained silty sand and clay, highly to intensely jointed, predominately highly |      |             |              |                 |                         |                     |                 |                     |       | N T              |
| 230.6-<br>230.7')<br>VOCs<br>BET |                                 |             | - 231.0       | jointed, sandstone contains little pyrite mineralization throughout that are very fine grained in size, little pores to vugs throughout, pits and vugs are filled with very fine sand and clay as well as secondary mineralization of euhedral pyrite and chalcopyrite, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are irregular and are smooth due to friability and display in  |      |             |              |                 |                         |                     |                 |                     |       |                  |
| (231.6-<br>231.7')<br>VOCs<br>BF | 1.8'                            |             | 232.0         | 232.0 - 233.8' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is well sorted, moderately hard, moderately well cemented with clay and quartz cement, semi-friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds,   |      |             |              | <del>4.11</del> |                         | is my               |                 |                     |       | 16.7%            |

| Sam                               | ple                             |             |               | ·   |      |             |              |     |                         |                     | Soil Pro        | operties            |       | ] [              |
|-----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                   |                                 |             | _             | bedding planes, little bioturbation where<br>burrows are filled with a bluish-grey very<br>fine grained silty sand and clay, highly to  |      | ^^          | 00000        | ppm |                         |                     |                 |                     |       | Very<br>Poor     |
| (232.3-<br>232.4')<br>VOCs<br>BET |                                 |             |               | intensely jointed, predominately highly jointed, sandstone contains little pyrite mineralization throughout that are very fine grained in size, little pores to vugs throughout, pits and vugs are filled with very fine sand and clay as well as secondary mineralization of euhedral pyrite and chaicopyrite, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, |      |             |              |     |                         |                     |                 | -                   |       |                  |
| (233.2-<br>233.3')<br>VOCs<br>BET |                                 |             | 233.0         |   |      |             |              |     |                         |                     |                 |                     |       | i i              |
|                                   |                                 |             | 224.0         | NOTE:  BET - Between closely spaced fractures. AF - Above Fracture Surface. BF - Below fracture surface. BKN - Broken or crumbled section. NA - Not applicable.   |      |             |              |     |                         |                     |                 |                     |       |                  |

234.0

### Dames & Moore

|                | LOCATIO                               | OF OF           | BORIN    | S   |                      |           |                  |      |        | JOB NO.       | C               | JENT                |             | Lice                                   | MOGE           |          |
|----------------|---------------------------------------|-----------------|----------|---|----------------------|-----------|------------------|------|--------|---------------|-----------------|---------------------|-------------|--|----------------|----------|
|                |                                       |                 |          |   |                      |           |                  |      |        | ENGRAN        |                 | Madison             | V.          |  | Tadiso.        | . /      |
|                |                                       |                 |          |   |                      |           |                  |      |        | DRILLING MET  |                 | 1,005               | 7           | , , ,                                  | BORING         | NO.      |
|                |                                       |                 |          |   |                      |           |                  |      |        |               |                 |                     | <del></del> |  | MI             | 0-4      |
| ( )            |                                       |                 |          |   |                      |           |                  |      |        |               | ball            | 6:2 5%              | وندون مد    | 25.0                                   | SHEET          |          |
|                |                                       |                 |          |   |                      |           |                  |      |        | SAMPLING MET  | ~00:            |                     | 467         | <i>y</i> ( <i>r</i>                    | 1.             | × 3      |
|                |                                       |                 |          |   |                      |           |                  |      |        |               |                 |                     |             |  | DRIL           |          |
|                |                                       |                 |          |   |                      |           |                  |      |        |               | Spl             | + Spe               | <u>-</u>    |  | START          | FINI     |
|                |                                       |                 |          |   |                      |           |                  |      |        | WATER LEVEL   | T               | / /                 |             |  | TIME           | שוד      |
|                |                                       |                 |          |   |                      |           |                  |      |        | TIME          |                 |                     |             |  | 0900           | 136      |
|                | }                                     |                 |          |   |                      |           |                  |      |        | DATE          |                 |                     |             |  | DATE           | DA"      |
| .              | DATUM                                 |                 |          |   |                      |           | ELEVATO          | D~   |        | CASING DEPTH  |                 |                     |             |  | 6/5            | 61       |
|                | 5 =                                   |                 | ្នុំ     | THE TO  | t s                  | b         |                  |      | SURFAC | E CONDITIONS: |                 |                     |             |  | ,              |          |
| I.             | SAMPLER                               | 1 1 COV 1 1 1 B | DEPTH OF | 1 /   | nlows/FT.<br>Samplen | HUMBER OF | DEPTH<br>IN FEET | SOIL |        |               |                 |                     |             |  |                |          |
| NO             | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 10.00           | E 0      |   | SAI                  | 707       | ō≅               | 5.0  |        | Asi           | 5~11            |                     |             |  | 0              |          |
| 20             |                                       |                 |          | /   | 1                    |           | 1.1              | !    | 1      | T T           |                 |                     |             |  |                |          |
| DINLLING CONTR |                                       |                 |          |   |                      |           | 0                |      |        |               |                 |                     |             |  |                |          |
| -97            |                                       |                 | -        |   | -                    |           | ],[              |      |        |               |                 |                     |             |  |                |          |
|                | /                                     |                 |          | <u> </u>                                      |                      |           | '                |      |        |               |                 |                     |             |  |                |          |
| $\circ$        | ,                                     |                 | •        | /   |                      |           | 2                |      |        |               |                 |                     |             |  |                |          |
| 60             |                                       | 1/              |          |   |                      |           | -                | 1    |        |               |                 |                     | -           |  |                |          |
| 9              | 2                                     | 19              |          | 45  | 7-13                 | 15-13     | 3                | (    | 2.5    | 4.5           | Silt            |                     |             | 12 6                                   |                |          |
| 0              |                                       | /               |          | 7   |                      |           |                  | }    | ~      | 7- 0          | 5,77            |                     | nte t       | 1 ? (-)                                | mvel,          | mo:      |
| 62             |                                       |                 |          |   |                      |           | 4                | )    |        |               |                 | <del>0, 11 12</del> | 7.0 7.      | <u> </u>                               |                |          |
| ON0209582      | ,                                     |                 |          |   |                      |           | 5                |      |        |               |                 |                     |             | _                                      |                |          |
|                |                                       |                 |          |   |                      |           | Н                | )    |        | Ü.            |                 |                     |             | -                                      |                |          |
|                | 24                                    | io              |          | 2/10  | 9-15                 | 43-573    | 6                | \    | - 5    | 7 6           | 11              |                     |             |  |                |          |
|                |                                       | 7               |          | /   |                      |           | H                | )    |        | <u> </u>      | J <del>.,</del> | thee of             |             |  | raved.         | 175.     |
|                |                                       |                 |          |   |                      |           | 7                |      |        |               |                 |                     | hrows.      | 70 74,                                 | 1              |          |
|                | 12                                    | 22              |          | 3/15  | 13-16                | -23-      | , <u>,</u> [     | )    |        |               |                 |                     |             |  | · · ·          |          |
|                |                                       | 27              |          | <u> </u>                                      | 12 1                 |           |                  | )    | 75 -   | 9.5 5,        | 1+              |                     |             |  |                |          |
|                |                                       |                 |          |   | ļ                    |           | 9                | )    |        |               |                 | Same                | wi.         | 5-7                                    | 1)             |          |
| - 1            |                                       | 1               |          |   | 1                    |           | _ H              |      |        |               |                 |                     |             |  |                |          |
|                |                                       |                 | l        |   | 1                    |           | οH               | 1    |        |               |                 |                     |             |  |                |          |
|                | 24                                    | 20              |          | 4/12  | 13.13                | -:7-13    | , [              |      | 10 -   | 12 5          | 14              | Some 5=             | ad +        | ************************************** | Carel          | in       |
| à              | /                                     | 20              | <u>}</u> | 13  |                      |           | H                | 1    |        |               |                 |                     | ישיחה או    | 15 Y                                   |                | 777.     |
|                |                                       |                 | - 1      |   |                      |           | 2                | /    |        |               |                 |                     |             |  |                |          |
| CHK'D          | 2'                                    | 1/              |          | 5/  |                      | -15-1     | , H              | 1    |        |               |                 |                     |             |  |                |          |
| 刘              |                                       | 37              |          | 5/145   | /-/7                 | -/5-/     | <sup>3</sup>     | (    | 13.5   | - 14.5        |                 | Same                | \5 C        | -7-7                                   | <del>- }</del> |          |
| -1NI           |                                       |                 |          | /   |                      |           | 4                | 7    |        |               | -               | 350776              |             |  |                |          |
| 30             | -V                                    | _               |          |   |                      |           | ~ []             | /    |        |               |                 |                     |             |  |                |          |
| खेला           |                                       |                 |          |   |                      |           | 5                | \    |        |               |                 |                     |             |  |                |          |
| DATE           | 2                                     | 1./             |          | <u> </u>                                      |                      |           | Н                | 1 +  | 15:-   | .57           | / 5             |                     |             |  |                |          |
| 10             | 1                                     | 20              |          | 6/7/  | 3-15                 | 45-4      | 8 6              | >-+  | 15 -   | 1./           | 1 2             | inme to             | 5-7         | 1                                      | Mrs            | <u> </u> |
| , ,            |                                       | $\overline{A}$  | 1        |   | Ť                    |           | <b>,</b> H       | ) .t |        |               |                 |                     |             |  |                |          |
| <u> </u>       | _/                                    |                 |          |   |                      |           | 7                |      |        |               |                 | 1                   |             |  |                |          |
| - Na           | المنتها                               |                 | 1        | 17.5  | 15-19-               | 22-7      | * 8 H            | ) [  |        |               |                 |                     |             |  |                |          |
| . A            | -/-                                   | 1               |          | <u>                                      </u> |                      |           | H                | >    | . 17.5 | -19.5         | 150             | (ij                 | 5-7         | 2)                                     |                |          |
|                |                                       |                 |          | /   |                      |           | 9                | )    |        |               |                 | مرور حز             | Sand        | ٠٠٠٠٠ المالجات                         |                |          |
| 5              |                                       | オ               | -        | 7   | - †                  | $\dashv$  | H                | ´    |        |               |                 |                     |             |  |                |          |
| * 1            | 1/                                    | 1               | ļ        | /   | ŀ                    | 1         | ρH               | 1    |        |               |                 |                     |             |  |                |          |

## Dames & Moore

|                     | Location                  | Of 00011   | _             |                      |           |            | <b>D</b> 41 | 1103         | C IIIO        | OI E    |             |        |            |  |             |
|---------------------|---------------------------|--|---------------|----------------------|-----------|------------|-------------|--------------|---------------|---------|-------------|--------|------------|--|-------------|
|                     | LOCATION                  | OF BOdie   | AC.           |                      |           |            |             |              | JOB NO.       |         | CHENT       |        | Iroc       | MORA                                   |             |
|                     | 14                        |  |               |                      |           |            |             |              | -             | •       | Madison     | 4.55   | 17         | adiso.                                 | 3 40 .      |
|                     |                           |  |               |                      |           |            |             |              | DRILLING MI   | ETH-00: |             |        |            | BORING                                 | NO.         |
|                     |                           |  |               |                      |           |            |             |              |               |         |             |        |            | Me                                     | 1.4         |
|                     |                           |  |               |                      |           |            |             |              |               | hai     | lew Ste     |        |            | SHEET                                  |             |
| 1 1                 |                           |  |               |                      |           |            | •           |              | EALARI INC. I | 57.107  | 1 (Ca) 3771 | z duge | 3,5        | 2                                      | 5           |
|                     |                           |  |               |                      |           |            |             |              | SAMPLING M    | EIHOO:  |             |        |            |  | -           |
|                     |                           |  |               |                      |           |            |             |              |               |         |             |        |            | DRIL                                   | DMG         |
|                     |                           |  |               |                      |           |            |             |              |               | - 1     |             |        |            | START                                  | FIN:        |
|                     |                           |  |               |                      |           |            |             |              | WATER LEVE    | L       |             |        |            | TIME                                   | שוד         |
|                     |                           |  |               |                      |           |            |             |              | TIME          |         |             | _      |            | 0900                                   | 1 /-        |
|                     | al.                       |  |               |                      |           |            |             |              | DATE          |         |             |        |            | DATE                                   | DA"         |
|                     | DATUM                     |  |               |                      |           | ELEVAT     | ION         |              | CASING DEPT   |         |             |        |            | 6/5                                    | 61          |
|                     | E 25                      | 1 30   | Jampie<br>NO. | 1 :=                 | 8         |            |             | SURFAC       | E CONDITIONS  | :       | <u>'</u>    |        |            | <u> </u>                               | 1           |
|                     | SAMPLER<br>TYPE<br>MCWf 1 | DEPTH OF<br>CASING                               | 1 /           | DLOWS/FT.<br>SAMPLEN | NUMBER OF | DEPTH      | SOIL        |              | <u> </u>      |         |             |        |            |  |             |
| INO                 | 1 × 1                     | 5 5  | Tin a         | SAS                  | 38        | 25         | SE          |              |               |         |             |        |            |  |             |
| - Ŭ                 |                           |  | 1 ==          |                      | z         | 1          |             |              |               |         |             |        |            | ·                                      |             |
| Š                   |                           |  | /             |                      |           | ٥٤         |             |              |               |         |             |        |            |  |             |
| OHILUNG CONTH,      |                           | 1  | V.,           |                      | ļ ·       | 4 }        | 4)          |              |               |         |             |        |            |  |             |
|                     | 24                        |  | 133           | 13 - 3               | 5-36-3    | 21         | 1>          | <u> </u>     | <u> </u>      | 14 5    | ome sa      | -d tr  | ير د د     | mavel                                  | - درا       |
| -                   |                           | 71   | 133           | 1                    | <u>,</u>  | 7          | ┦)          | <b>—</b>     |               |         |             | brow   | <u> </u>   |  |             |
| $\sim$              |                           |  | /             |                      |           | 72         | 1           | <del> </del> |               |         |             |        | n .        |  |             |
| တ                   |                           | <del> </del>                                     |               |                      | 1         | -          | -           |              |               | -       |             |        |            |  |             |
| (L)                 |                           |  |               |                      |           | 23         | 1162        |              |               |         |             | 11     |            |  |             |
| 0                   |                           | 1  |               |                      |           | 1 1        | -           |              |               |         |             |        |            |  |             |
| 22                  |                           |  | /             |                      |           | 24         | 1           |              |               |         |             |        |            |  |             |
| JN0209582           |                           | 1  |               |                      |           | 1          | 1           |              |               |         |             |        |            |  |             |
| ()                  |                           | 1  |               |                      |           | 25         | 17          |              |               |         |             |        |            |  |             |
|                     | 24/                       |  | 19/           | 18-4                 | 28.20     | 1,[        | ] >         |              | S             | sme     | A.          | 20 -2  | <u>څ</u> و |  |             |
| -                   | //                        | 0  | 127           |                      | 13        | ]~"[       | ] )         |              |               |         |             |        |            |  |             |
| **                  |                           | 1  |               |                      |           | 27         | $\nu$       |              |               |         |             |        |            |  |             |
|                     |                           | <u> </u>   |               |                      |           |            |             |              |               |         |             |        | 0          |  | 10          |
| İ                   |                           |  |               |                      |           | 28         |             |              |               |         |             |        |            |  |             |
|                     |                           | -  |               |                      |           | -          |             |              |               | - 1     | <del></del> |        |            |  |             |
|                     |                           |  |               |                      |           | 29         | 1           |              |               |         |             |        | 11.        |  | -           |
|                     |                           |  |               | - 1                  |           | -          | 1           |              |               |         |             |        |            |  |             |
|                     |                           |  |               |                      |           | 30         |             |              |               |         |             | 2:     |            |  |             |
|                     | 124/                      | 1  | 10/           | .,, 1                | 504       |            | 11          |              | <del></del>   |         |             |        |            |  |             |
|                     | 10                        | اا   | /332          | 44-                  | 3         | 31         | )           |              | <b>S</b> 4    | ·ne     | as 2        | ( - 22 |            |  | -           |
| à                   | 1/                        | 1  |               |                      |           | ,,         | ])          |              |               |         | ,3 == -     |        | -          |  |             |
| כווג.ם מג           |                           |  |               |                      |           | 32         |             |              |               | *****   |             |        |            |  | <del></del> |
|                     |                           |  |               | ].                   |           | 33         |             |              |               |         |             |        |            |  |             |
| .     -             |                           |  |               |                      |           | 7-         |             |              |               |         |             |        |            |  |             |
|                     |                           |  |               |                      |           | 34         | , ,         |              |               |         |             |        |            |  |             |
| 1 1                 |                           | <del>                                     </del> |               |                      |           | -  -       |             |              |               |         |             |        |            |  |             |
|                     |                           |  | /             | 1                    | 1         | 35         |             |              |               |         |             |        |            |  |             |
| DA1E.               | 124/                      | 1  | <del></del>   |                      |           | H          | <i> </i>    |              |               |         |             |        |            |  |             |
|                     | 2/2                       |  | <b>"/</b> :\  | ٠٤٠٠٠٦               | -18.      | 36         | )~          |              | , J J *       |         | ich. 7      | 4.     |            |  |             |
|                     | 1/                        | 7  | <del></del>   | 23-33                | 3         | ,_H        | <b>!</b> }  | 2/3          | <u> </u>      |         | String      | 5.14   | *          | <u>d , 36</u>                          | 2           |
| $\cup_{\mathbb{L}}$ |                           |  |               |                      |           | 37         |             |              |               | Doc     | 1           | 1000   | ÷ 1.       |  | _           |
|                     | 1/                        |  | 1             |                      |           | т. Н       | ŀ           |              |               |         | ,           |        | ·····      | ······································ |             |
| 1                   |                           |  |               |                      |           | 3 <b>8</b> |             |              |               |         |             |        |            |  |             |
| 3                   | 1/                        | 1  |               |                      |           | 39         |             |              |               |         |             |        |            |  |             |
| 5                   |                           |  | 4             |                      |           |            |             |              |               |         |             |        |            | 7 - 2 - 4                              | Þ           |
| =                   |                           |  |               |                      | - 1       | 4 o H      |             |              |               |         |             |        |            |  |             |
| - 1                 | . /                       | . '  | ,             | ,                    | •         | , ,        | •           |              |               |         |             |        |            |  |             |

Dames & Moore

|                  |         |   |                    |            |           |                    |                  | Dai  | nes               | & MOOI        | re          |             |              |      |                  |       |
|------------------|---------|---|--------------------|------------|-----------|--------------------|------------------|------|-------------------|---------------|-------------|-------------|--------------|------|------------------|-------|
|                  | LOCA    | TION OF                                 | BORIN              | G          |           |                    |                  |      |                   | JOB NO.       | CLIE        | nt<br>Nels: | ···          | l LC | Kanon<br>Hadisti | · ·   |
|                  |         | •                                       |                    |            |           |                    |                  |      |                   | DRILLING METH |             |             | ·            | 10 1 | BORING           | MO.   |
|                  | 1       |   |                    |            |           |                    |                  |      |                   |               |             |             | •            |      |                  | -41.  |
| 1, )             |         |   |                    |            |           |                    |                  |      |                   | he/           | 10:00       | Sicon       | 5-50         | 1    | SHEET            |       |
|                  |         |   |                    |            |           |                    |                  |      |                   | SAMPLING METH | 100:        |             | ,            |      | 3,               | × 3   |
|                  |         |   |                    |            |           |                    |                  |      |                   |               |             |             |              |      | DRIL             | UNG   |
|                  |         |   |                    |            |           |                    |                  |      |                   | WATER LEVEL   | 501.7       | Sper        | <u> </u>     |      | START            | FINE: |
|                  |         |   |                    |            |           |                    |                  |      |                   | TIME          |             | 1           |              |      | 0900             | 13    |
|                  |         |   |                    |            |           |                    |                  |      |                   | DATE          |             |             | <del> </del> |      | DATE             | DA*   |
|                  | DATU    | м                                       |                    |            |           |                    | ELEVAT           | 100  |                   | CASING DEPTH  | ·····       |             | i            |      | 6/5              | 61    |
|                  | E       | MCHT1                                   | ρğ                 | JAMPLI MG. | 14.4      | 0                  | - 5              | -    | SURFAC            | E CONDITIONS: |             | ·           |              |      |                  |       |
| 12               | SAMPLEH | 10001 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | UEFTH OF<br>CASING |            | DLOWS/FT. | NUMBER OF<br>RINGS | DEPTH<br>IN FEET | SOIL |                   |               |             |             |              |      |                  |       |
| 00               | 100     |   | 50                 |            | 2 %       | 2                  | 25               |      |                   |               |             |             |              |      |                  |       |
| LING             |         | 3/3                                     | :                  | 13/        |           |                    | 40               | ١,   | i                 | lething       | 30.         | nils :      | ا متر        | Mois | + green          | رادن  |
| DIBLUMG CONTH.   |         |   |                    | / i£i.     |           | 1                  |                  | 1    |                   |               | <del></del> |             |              |      |                  | 600   |
|                  | -       |   | ٠.                 |            |           |                    | 4                | ]    | <del>}</del> /- 5 | /<br>1 →      | C-          | 15 70       |              | (*): |                  |       |
| 383              |         |   |                    |            |           |                    | 42               | 1    | 21 2              |               | Sanı        | 1570        | .7è.         |      | 19               |       |
| 96               |         |   |                    |            |           |                    | 43               |      |                   |               |             |             |              |      |                  | ··    |
| JN209582         |         |   |                    |            |           |                    | Lia              | }    |                   |               |             |             |              |      |                  |       |
| Ó                |         |   |                    |            |           |                    | 45               |      |                   |               |             |             |              |      |                  |       |
|                  |         |   |                    |            |           |                    | 46               | 1    |                   |               |             |             |              |      |                  |       |
| 9                |         |   |                    |            |           |                    | 47               |      |                   |               |             |             |              |      | *                |       |
| ;                |         |   |                    |            | . !       |                    | 48               |      |                   | _·            |             |             |              | 10   | 5                |       |
| -<br>-<br>-<br>- | _       |   |                    |            |           |                    |                  |      |                   |               |             | 3           |              |      |                  |       |
|                  |         |   |                    |            |           |                    | 49               |      | //                |               |             |             |              |      | e e              |       |
|                  |         |   |                    |            |           |                    | 50               |      |                   | V :1          |             |             |              |      |                  |       |
| 10               |         |   |                    |            |           |                    | 51 -             | <    |                   | - Batheir     | 1 01        | bo          | crina        | _51  |                  |       |
| CHK'D BY         |         |   |                    |            |           |                    | 2                |      |                   |               |             | <del></del> |              |      |                  |       |
|                  |         |   |                    |            |           |                    | 3                |      |                   |               |             |             |              |      | 27               |       |
|                  |         |   |                    |            |           |                    | 4                |      |                   |               |             |             |              |      |                  |       |
| 三二               |         |   |                    | /          |           |                    | 5                |      |                   |               |             |             |              | ·    |                  |       |
| DATE.            |         |   |                    |            |           |                    | 6                |      |                   |               |             |             |              |      |                  |       |
| À                |         |   | -                  |            |           | $\dashv$           | _                |      |                   |               |             |             |              |      |                  |       |
|                  |         | 4                                       |                    |            |           |                    | 7                |      |                   |               |             |             |              |      |                  |       |
|                  |         |   |                    |            | -         |                    | 8                |      |                   |               | ts.         |             |              |      |                  |       |
| 2                |         |   |                    |            |           |                    | 9                |      |                   |               |             |             |              |      |                  |       |
|                  |         | 1                                       |                    | 1          | 1         | $\neg$             |                  |      |                   |               |             |             |              |      |                  |       |
| . = 1            | 1       | / 1                                     | . !                | /          | 1,        | 1                  | 111              |      | 5 11 4            |               |             | 2           |              |      |                  |       |

Dames & Moore LOCATION OF BORING CLIENT MOG ADOM Mades DRILLING METHOD: MW-4 hollow Stem auger SHEET SAMPLING METHOD: DRILLING Split Specia START WATER LEVEL TIME 1330 17 TIME DATE DA 6/ 6/5 ELEVATION CASING DEPTH SURFACE CONDITIONS: No209582 ( ) umcuma comm. Asinhalt 0 Sample taken from ?-11 ft S.H. sem save 17-49-43-54 102 Meet VERY cheese 153 204 255 306 357 Sandston 408 Served & Laine 653 K4 FOB

|        | ate of V<br>epartme     |                 | in<br>atural Res | ources                               | oute To:                                |                    |          |             |             |              | SOIL        | BOR                     |                     | .O <b>G</b> !            | NFO              | RMA       |                  |
|--------|-------------------------|-----------------|------------------|--------------------------------------|---|--------------------|----------|-------------|-------------|--------------|-------------|-------------------------|---------------------|--------------------------|------------------|-----------|------------------|
|        |                         |                 |                  |                                      | Solid Waste                             |                    | □ на     |             |             |              |             | . 51111 44              | 00-122              |                          |                  |           | 7-91             |
|        |                         |                 |                  |                                      | Wastewater                              |                    | □ Wa     |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 |                  |                                      | Emergency                               |                    | Oth      |             |             |              |             |                         |                     |                          | Page             | 1         | 5                |
|        | cility / F              |                 |                  |                                      |   |                    |          |             |             |              | ring Nurr   | nber                    |                     |                          | Number           |           | <u> </u>         |
|        | <u> </u>                | on Ki           | pp               |                                      |   | <u> </u>           |          |             | <u> </u>    |              | -           |                         | _                   | MW                       | /-4D2            |           |                  |
|        |                         |                 |                  | me and name of crew<br>agDave Cruise | chief)                                  |                    | 1        | Drilling    |             |              |             | te Drillin              |                     |                          |                  | illing Me | ethod<br>ID HSA/ |
|        | auge.                   | Juli            | - 10             |                                      |   |                    | MIN      | <u>/ /-</u> |             | 99<br>Y Y    |             | 07<br>MM                | DD                  | 1 <del>- 99</del><br>Y Y |                  | Air Ro    |                  |
| DN     | R Facil                 | lity Well       | No.              | WI Unique Well No.                   | Common W<br>MW-4D                       |                    | Fina     | Static      |             |              | Sur         | lace Elev               | ation               |                          |                  | rehole (  | Diameter         |
| Bor    | ing Loc                 | ation           | to have a        |                                      |   |                    | <u> </u> |             | Feet N      | ASL.         | 1.00        | -1 C                    | Feet                |                          | <u> </u>         | 10        | inches inches    |
| Sta    | te Plan                 | e               |                  | N                                    |   |                    | L        | at —        |             | _            | 1 200       | al Grid L               |                     | ] N<br>(11 Abbii         | cable)           |           | ΠĘ               |
| Cou    | W 1/4<br>Inty           | or S            | W 1/4 o          | Section5                             | г <u>7</u> н,                           | R 10 E             | I Lor    |             |             | _            | <u> </u>    |                         | eet _               | s                        |                  | Fe        | eet 🗆 W          |
| -      | Dan                     | e               |                  |                                      |   | DNR County         | 3        |             |             |              | City / or ' |                         |                     |                          |                  |           |                  |
| San    | npie                    | 1               |                  | 1                                    |   | <u> </u>           |          |             | T           | Ly Oi .      | Madis       | On                      |                     |                          |                  |           |                  |
|        | 12                      | Blow Counts (N) | 늄                |                                      |   |                    |          |             |             | Ē            |             | -                       | Soil Pa             | ropertie<br>I            | 5                |           | sputs            |
| ber    | ered                    | lun o           | E F              |                                      | ck Descr                                |                    |          |             | ic Lo       | iagra        | ۵           | ation                   | <u>ء</u> ع          |                          |                  |           | E E              |
| Number | Length<br>Recovered (N) | ₹               | Depth in Feet    |                                      | logic Ori<br>1 Major U                  |                    |          | nscs        | Graphic Log | Well Diagram | PID/FID     | Standard<br>Penetration | Moisture<br>Content | Limik                    | Plastic<br>Limit | P 200     | ROD/Comments     |
|        | 2 6                     | 1 00            |                  |                                      |   |                    |          | -           | 10<br>44    | >            | п_          | N T                     | ≥ 0                 | 33                       | <u> </u>         | <u>-</u>  | 8                |
|        |                         |                 |                  | FILL, GRAVE                          | EL, little sa                           | nd, little silt,   |          |             |             |              |             |                         |                     | -                        |                  |           |                  |
|        |                         |                 | F 1              | dry, brown.                          |   |                    |          | GM          |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | _ 2              |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | E.,              | CLAY, some s                         | ilt. trace sa                           | and low plas       | ticity   |             |             |              |             |                         |                     |                          |                  |           |                  |
|        | 1                       | 1               | - <sub>3</sub>   | dry, brown.                          | , | e, .o p.e.         | tionty,  |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | -                |                                      |   |                    |          | CL          |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | _ ₄              |                                      |   | 7.5<br>\$          |          |             |             | Ī            |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | _                |                                      |   | 1                  |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         | -               | _ 5              |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | <u>-</u>         |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | <u> </u>         |                                      |   |                    |          |             | M           |              |             |                         |                     |                          |                  |           | •                |
|        |                         |                 | <del>-</del> 7   |                                      |   | _                  |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | -                | SAND, some s                         | ilt, fine-gra                           | ined sand, d       | ry,      |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         | 1               | 8                | light brown.                         |   |                    |          |             |             |              |             |                         |                     |                          |                  | ĺ         |                  |
|        |                         |                 | =                |                                      |   |                    |          | SM          |             |              |             |                         | ı                   |                          |                  | - [       |                  |
|        |                         |                 | <del></del> 9    |                                      |   |                    |          | 0           |             |              |             |                         |                     |                          | İ                | 1         |                  |
|        |                         |                 | -                | !                                    |   |                    |          |             |             | - 1          |             |                         |                     | - 1                      |                  | - 1       |                  |
|        |                         |                 | 10               |                                      |   |                    |          |             |             |              |             |                         |                     | ĺ                        | ľ                |           |                  |
|        |                         |                 | _ 11             | •                                    |   |                    |          |             |             |              |             |                         |                     | - 1                      |                  | İ         |                  |
|        |                         |                 | _                |                                      |   |                    |          |             |             |              |             |                         |                     | Ì                        |                  | - 1       |                  |
|        |                         |                 | 12               |                                      |   |                    |          |             |             |              |             |                         |                     |                          | -                |           |                  |
|        |                         |                 | =                |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         | ļ               | 13               |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
|        |                         |                 | -<br> - ,,       |                                      |   |                    |          |             |             |              |             |                         |                     |                          |                  |           |                  |
| ! here | by certi                | ify that        | the inform       | ation on this form is tr             | ue and correc                           | t to the hest of a | ny kao-  | ularina     |             |              | 1           |                         | 1                   |                          |                  |           |                  |
| Signa  | ture                    | 1               | 11               | Na. t                                |   | - 12 are orat of h | Firm     | ricuge,     |             |              |             |                         |                     |                          |                  |           | <del></del>      |

Dames & Moore, Madison, WI This form is authorized by Chapters 144,147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144,99 and 162,06, Wis. Stats

Firm

### SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

7.01

| Вог    | ing Num                 | ber             | MW-           | 4D2  | 701111 | 4400        | -122         | •       |                         |          | F       | age | 2 nf  | 7-91<br>5    |
|--------|-------------------------|-----------------|---------------|--|--------|-------------|--------------|---------|-------------------------|----------|---------|-----|-------|--------------|
| San    | nple                    | Ê               | 1             |  |        |             |              |         | T                       | Soil P   | opertie |     |       |              |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feel | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit        | USCS   | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture |         |     | P 200 | ROD/Comments |
|        |                         |                 | 15            | SAND, some silt, fine-grained sand, dry, light brown.  BEDROCK, SANDSTONE. | SM     |             |              |         |                         |          |         |     |       |              |

State of Wisconsin Department of Natural Resources

# SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A 7-91

| Sample   S | Bori   | ing Num                | ber _       | MW-  | 4D2                     | ,    |             |              |         |                         |         | £ | Page : | 3 of  | 7-91<br>5  |
|--|--------|------------------------|-------------|--|-------------------------|------|-------------|--------------|---------|-------------------------|---------|---|--------|-------|------------|
| BEDROCK, SANDSTONE.  38  39  40  41  42  43  44  45  47  49  49  50  51  52  55  55  55  55  55  55  55  55  | Sam    | ple                    | (X)         |  |                         |      | Ι-          |              |         |                         | Soil Pr |   |        |       |            |
|  | Number | Length<br>Recovered (? | Blow Counts | Depth in Feet  | And Geologic Origin For | USCS | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration |         |   |        | P 200 | ROD/Commen |
|  |        |                        |             | 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 45 - 46 - 47 - 48 - 48 - 49 - 50 - 51 - 52 - 53 - 54 |                         |      |             |              |         |                         |         |   |        |       |            |

State of Wisconsin Department of Natural Resources

# SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A 7-91

| Borin  | g Num                   | ber             | MW-  | <u>.                                    </u>                        |      |             |              |         |                         |                     | F      | age              | f of  | 5            |
|--------|-------------------------|-----------------|--|---|------|-------------|--------------|---------|-------------------------|---------------------|--------|------------------|-------|--------------|
| Samp   | le                      | S)              |  |   |      |             |              |         |                         | Soil Pr             | орепіе |                  |       |              |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet  | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | uscs | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid | Plastic<br>Limit | P 200 | ROD/Comments |
|        |                         |                 | 58<br>59<br>60<br>61<br>61<br>62<br>63<br>64<br>65<br>66<br>67<br>68<br>67<br>70<br>71<br>72<br>73<br>74<br>75<br>76<br>77 | BEDROCK, SANDSTONE.   |      |             |              |         |                         |                     |        |                  |       |              |

State of Wisconsin Department of Natural Resources

### SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

7-91

|                                   |                 |               |   | Form | 4400        | )-122A       |         |                         |                     |                             | _       | _     | 7-91         |
|-----------------------------------|-----------------|---------------|---|------|-------------|--------------|---------|-------------------------|---------------------|-----------------------------|---------|-------|--------------|
| Boring Nun<br>Sample              |                 | 10100-        | 1   |      | 1           | T            | 1       |                         |                     |                             | age _ 5 | of    | 5            |
| Number<br>Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | uscs | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | opertie<br>Pinini<br>Cilili |         | P 200 | ROD/Comments |
|                                   |                 | _ 99          | BEDROCK, SANDSTONE.   |      |             |              |         |                         |                     |                             |         |       |              |

|         |                         | isconsii<br>t of Na | n<br>tural Resi | OUTCAS.                  |              |                    |          |          |  |              | SOIL       | BOR        | NG L     | OG I        | NFOF               | MAT      | OI           |          |
|---------|-------------------------|---------------------|-----------------|--------------------------|--------------|--------------------|----------|----------|--|--------------|------------|------------|----------|-------------|--------------------|----------|--------------|----------|
|         |                         |                     | Ħ               |                          | uta To:      |                    | ☐ Ha:    | . Wast   | n .  |              | F          | Form 440   | 0-122    |             |                    |          |              | 7-91     |
|         |                         |                     |                 |                          | Solid Waste  |                    |          | lengrou  | _  | nks          |            |            |          |             |                    |          |              |          |
|         |                         | 35                  |                 | 8                        | Wastewater   |                    |          | ter Res  |  |              |            |            |          |             |                    |          |              |          |
|         |                         |                     |                 |                          | Emergency    | Response           | C Oth    | er       |  |              |            |            |          | F           | age                | of_      | 3            | D        |
|         | -                       | oject N             |                 |                          |              |                    | Lic      | ense/Po  | ermit/N                                      | lonitori     | ing Numl   | ber        |          |             | Number             |          |              |          |
|         |                         | n Kir               |                 |                          |              |                    |          |          | _  |              |            |            | _        | MW          |                    |          |              |          |
|         |                         |                     |                 | ne and name of crew      | *            |                    |          | Drilling |  |              |            | e Drilling |          | sted .      | Dri                | ling Me  | thod         |          |
| Bŧ      | lager                   | State               | Drillin         | g-Kevin McCur            | nber         |                    | MN       | L /-     | 14 /.<br>D                                   | <u>101</u>   |            | 04 /       | 04<br>DD | / <u>01</u> |                    | 1/4"     |              |          |
| i iki:  | 831 + (                 | <br>V Webs          | Y61             | Parth specifical Con-    | Common V     | Vell Name          |          | Static 1 |  |              |            | ace Elev   |          | 11          |                    | ir Ro    |              |          |
|         | likus (ii)              |                     |                 |                          | MW-5S        |                    | 1_       |          | eet M  |              |            |            | Feet     | MSL         | "                  | 10.3     | Inc          | hae      |
|         | g Loca<br>Plane         |                     |                 | N                        |              | S/C/N              | 1 4      |          |  |              | Loca       | i Grid L   |          |             | cable)             |          | _ ===        | 1100     |
|         |                         |                     | V 44 -4         |                          |              |                    |          |          | _  |              | 1.         |            | -        | N           |                    |          |              | O E      |
| Coun    |                         | or .51              | V 1/4 of        | Section 5                |              | R 10 E<br>DNR Coun | 1 Lon    |          |  |              |            |            | et E     | S           |                    | Fe       | et           | D W      |
|         | Dane                    | •                   |                 |                          |              | 1                  |          | - 1      |  |              | ity / or V | _          |          |             |                    |          |              |          |
|         |                         | 1                   | 1               |                          |              | 1                  | 3        |          | CII  | y of I       | Madiso     | n          |          |             |                    |          |              |          |
| Samp    |                         | 3                   |                 |                          |              |                    |          |          |  |              |            |            | Soil P   | ropertie    | 8                  |          | 2            | V        |
| les .   | 3                       | £                   | 3               | Soil/Ro                  | ck Desci     | ription            |          |          | 3  | 틸            |            | 8          |          |             |                    | 1        | 툍            |          |
| Number  | F                       | 8                   | 툪               | And Geo                  |              |                    |          | တ        | Graphic Log                                  | Well Diagram | 9          |            | 2 E      |             |                    |          | ĕ            |          |
| ž       | Length<br>Recovered (N) | Blow Counts (N)     | Depth in Feet   |                          | h Major L    |                    |          | SSS      | Sign of                                      | N Se         | PID/FID    | Standard   | Moisture | E-rage      |                    | P 200    | ROD/Comments |          |
|         | 28                      | -                   |                 |                          |              | <del></del>        | *        |          | 44   |              |            | -          |          |             |                    | <u> </u> | æ            | <u> </u> |
|         |                         |                     |                 | FILL, GRAVE              | EL, sandy,   | brown              |          |          | 9.0  |              |            |            |          | 1           |                    |          |              |          |
|         |                         |                     | 1               |                          |              |                    |          | GM       | • •  |              |            |            | ł        |             | 1                  |          |              |          |
|         |                         |                     | E               |                          |              |                    |          |          | **   |              |            |            |          |             |                    |          |              |          |
|         |                         |                     | 2               |                          |              |                    |          |          | **   |              |            |            |          |             |                    |          |              |          |
|         |                         |                     | E               | 1                        |              |                    |          |          | φφ   |              |            |            |          |             | -                  | -        |              |          |
|         | ۱.,                     | 5,5                 | F 3             |                          | <del></del>  |                    | -        |          |  |              |            |            |          |             |                    |          |              |          |
| 1       | 14                      | 11,10               | 0) -            | CLAY, silty, st          | iff, moist,  | medium pla         | sticity, |          |  |              |            | 1          | 0        | 11          | ļ                  |          |              |          |
|         | ,                       |                     | - 4             | light reddish br         | own          |                    |          |          | <i>/////////////////////////////////////</i> |              |            |            |          |             | Î                  |          |              |          |
|         |                         |                     |                 |                          |              |                    |          | CL       |  |              |            |            |          |             |                    |          |              |          |
|         |                         | 1                   | 5               |                          |              |                    |          |          | <i>////.</i>                                 |              |            |            |          | i a         |                    |          |              |          |
|         |                         | ŀ                   | _               | 1                        |              |                    |          |          | <i>7//</i> 2                                 |              |            |            |          |             |                    |          | ŀ            |          |
|         |                         |                     | - 6             |                          |              |                    |          |          | <i>////</i>                                  |              |            |            |          |             |                    |          |              |          |
|         |                         | 1                   | =               |                          |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
| - 2     |                         |                     | _ 7             |                          |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
|         |                         |                     | =               |                          |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
|         |                         | 26,16               |                 |                          |              |                    |          |          |  |              |            | -          |          |             |                    |          |              |          |
| 2       | 3                       | 18,22               | 1               | -coarse sands            | tone grave   | el piece           |          |          |  |              |            |            |          | ĺ           |                    |          |              |          |
|         |                         |                     | - 9             | encountered,             | light brow   | n to tan           |          |          |  |              |            |            |          |             |                    |          |              |          |
|         |                         |                     |                 |                          |              |                    |          |          | <i>9</i> ///                                 |              |            |            |          |             |                    |          |              |          |
| - 1     |                         |                     | <b>M</b>        | 1                        |              |                    |          |          |  |              |            | - 12       |          |             |                    |          |              |          |
|         |                         |                     | 10              |                          |              |                    |          |          |  |              | 20         |            |          |             |                    |          |              |          |
|         |                         |                     | E 11            |                          |              |                    |          |          |  |              |            |            | -,       |             |                    |          |              |          |
|         |                         |                     | <u> </u>        |                          |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
|         |                         |                     | 12              |                          |              |                    |          |          |  | - 1          |            |            |          |             |                    |          |              |          |
| 5       |                         |                     | - '-            | <u> </u>                 |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
| 3       | 12                      | 13,19               | =               |                          |              |                    |          |          |  |              |            |            |          |             |                    |          |              |          |
|         |                         | 20,26               |                 | SAND, silty, trac        |              |                    |          | SM       |  |              |            |            |          |             |                    |          |              |          |
|         |                         |                     |                 | grained, dense, n        | noist, medic | ım graded, ve      | ry       | SP       |  |              |            |            |          |             |                    |          |              |          |
| 1 hosel | -                       | for short           |                 | light reddish brow       |              |                    |          |          |  |              |            | <u> </u>   |          | <u> </u>    | Different material |          |              |          |
| Signal  |                         | 77                  | A PO RECUIT     | hation on this form is t | ure and come | ex to the best o   |          |          |  |              |            |            |          | 12          |                    |          |              |          |
|         | A                       | Me                  | / 1 -/          | WALLED.                  |              |                    | Firm     | 1 10     | 100  |              | 44         | & Small    |          |             |                    |          |              |          |

Signature Film URS Corporation, Madison, WI

This form is authorized by chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for separate offense, pursuant to as 144.99 and 162.06, Wis. Stats

| Boris  | ng Num                  | ber             | MW-                        | <u>58</u>  | 0        |             | ji           |         |                         |                     | Pa     | age _ 2          | of_   | 7-91<br>3    |
|--------|-------------------------|-----------------|----------------------------|--|----------|-------------|--------------|---------|-------------------------|---------------------|--------|------------------|-------|--------------|
| Samp   | ole 2                   | 3               | -                          |  |          |             |              |         |                         | Soil Pr             | -      |                  |       |              |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet              | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | nscs     | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid | Plastic<br>Limit | P 200 | ROD/Comments |
| 4      | 18                      | 16,19<br>19,33  | 15<br>16<br>17<br>18<br>19 | SAND, silty, trace clay, fine to medium grained, dense, moist, medium graded, very light reddish brown  -fine grained, trace gravel, trace clay, dense, moist, medium graded, very light reddish brown | SM<br>SP |             |              |         |                         |                     |        |                  |       |              |
| 5      | 1                       | 50/3            | 22 23 24 26 26             | -as above, very dense, pulverized light tan to white fine grained sand in shoe   |          |             |              |         |                         | e.                  |        |                  | 1     | e e          |
| 6      | 8                       | 50/1<br>50/3    | 28 28 29 30 31 31 32 32    | -silty, trace sand and gravel, fine grained,<br>very dense, moist, medium graded, light<br>reddish brown   | SM<br>SP |             |              |         |                         |                     |        |                  |       | ı            |
| 7      | 6                       | 50/1<br>50/4    | 33<br>-34<br>-35<br>-38    | SANDSTONE, light brown   | BR       | 5.65        |              |         |                         |                     |        |                  |       | ».<br>0      |

SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A

| Borl   | ng Num                  | ber             | MW-                                   | <u>5S</u>   | rom. | *****       | 122          | •       |                         |                     | ;.<br>D | age_3            | nd.   | 7-91   |
|--------|-------------------------|-----------------|---------------------------------------|---|------|-------------|--------------|---------|-------------------------|---------------------|---------|------------------|-------|--|
| Sam    | ple                     | 2               |                                       |   |      |             |              |         |                         | Soil Pr             |         |                  | 01    | The second secon |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet                         | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content |         | Plastic<br>Limit | P 200 | ROD/Commerts   |
| 8      | 6                       | 100/6           | 36<br>37<br>38<br>38<br>40            | SANDSTONE, light brown  | BR   |             |              |         |                         |                     |         |                  |       |  |
|        |                         |                 | 43                                    | EOB @ 44.0 ft.<br>well set @ 44.0 ft.                               |      |             |              | -       | 3                       | ts<br>ts            |         | 7                |       |  |
| 10     |                         |                 | 48 - 48 - 49 - 50 - 51 - 52 - 53 - 53 |   |      |             |              |         |                         |                     | ž.      |                  |       |  |
|        |                         | ÷.              |                                       |   |      |             |              | ē       | 3                       |                     |         |                  |       |  |

|          |                         | isconsit<br>it of Na | a<br>tural Resou | HTTER.                         |                         |                |             |                |              |              | SOIL        | BORI                    | NG L                | OG II     | NFOR             | MAT     | ION          |      |
|----------|-------------------------|----------------------|------------------|--------------------------------|-------------------------|----------------|-------------|----------------|--------------|--------------|-------------|-------------------------|---------------------|-----------|------------------|---------|--------------|------|
|          |                         |                      | 1                | Ro                             | ute To:                 |                | □ Ha∷       | z. Wastı       |              |              | F           | form 440                | 0-122               |           |                  | •       | . 7          | 7-91 |
|          |                         |                      |                  |                                | Solid Waste             |                | □ Un        |                |              | nks          |             |                         |                     |           |                  |         |              |      |
|          | 8                       |                      |                  |                                | Wastewater              |                | □ Wa        |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      |                  | •                              | Emergency R             | esponse        | Oth         | er             |              |              |             |                         |                     | P         | age_1            | of_     | 1            |      |
|          | -                       | oject N              |                  |                                |                         |                | Lic         | ense/Po        | mit/f        | Monito       | ring Numl   | per                     |                     | Boring N  | lumber           |         |              |      |
|          |                         | n Kip                |                  |                                | 11.0                    |                |             |                | _            |              | - Ambien    |                         | <u>- l</u>          | MW        |                  |         |              | ٠.   |
|          |                         |                      |                  | and name of crew               | •                       |                |             | Drilling       |              |              |             | e Drilling              |                     |           | Dril             | ling Me | thod         |      |
| В        | ager                    | State                | Drumg            | -Kevin McCur                   | nber                    |                | MN          | 4 /-{          | 1 <u>3</u> / | VY<br>VY     |             | 04 /                    | 03<br>DD            | 01<br>YY  | 6                | 1/4"    | ID HSA       | A    |
| Fig.     |                         | <b>V</b> , 1902 -    | 46 0             | n physiological                | Common We               | all Name       |             | Static \       |              |              |             | ace Elevi               |                     | 11        | Bon              | ehole D | lameter      |      |
|          |                         |                      |                  | 2403                           | MW-3D2                  | 2              | _           | 1              | eet N        | ISL ·        |             |                         | _ Feet              | MSL       |                  | 10.     | _ inches     |      |
|          | ng Loca<br>a Plane      |                      |                  | M                              | E 9                     | /C/N           | 1 1         | at             |              |              | Loca        | d Grid Lo               | cation (            | If Applie | cable)           |         |              |      |
| 10000000 |                         |                      | TT 444 - 44      |                                |                         |                | Lor         | -              |              |              |             | _                       |                     | N         |                  |         | . 🖸          | E    |
| Cour     |                         | or <u>5</u>          | W 1/4 of 5       | Section 3 1                    | 7 N. F                  | DNR Count      | ٠.          |                |              | <u> </u>     |             | Fe                      | et 🖸                | S         |                  | Fe      | et 🗖         | W    |
|          | ,<br>Dane               | 1                    |                  |                                |                         | 1              | 3           | - 1            |              |              | City / or \ | _                       |                     |           |                  |         |              |      |
|          |                         | 1                    | 1                |                                |                         | <u> </u>       |             |                | · CI         | ty or        | Madiso      | on                      |                     |           |                  |         |              |      |
| Sam      |                         | E                    |                  | •                              |                         |                |             |                |              | _            |             |                         | Soil P              | opertie   | B .              |         | n            |      |
| _        | Lengun<br>Recovered (N) | Blow Counts (N)      | Depth in Feet    | Soil/Ro                        | ck Descri               | ption          |             |                | 3            | Well Diagram |             | 8                       |                     |           |                  |         | ROD/Comments |      |
| Number   | = \$                    | 8                    | =                |                                | logic Orig              |                |             | S              | Graphic Log  | 쿌            | ₽           | Standard<br>Penetration | Moisture<br>Content | -         | ٥                |         | E<br>8       |      |
| 쿮        |                         | 1 8                  | <b>a</b>         |                                | h Major U               |                |             | USCS           | 9            | ₩<br>₩       | PID/FID     | Star P                  | S S                 |           | Plastic<br>Limit | P 200   | Ö            |      |
|          | F-                      | -                    | -                |                                |                         |                | <del></del> | <del>-</del> - | -            |              |             |                         |                     | -         |                  | -       | œ            |      |
|          |                         |                      |                  | •                              | 71                      |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      |                  | Blind drilled                  | , no sample             | s collected    |             |                |              |              |             | 1                       |                     |           |                  |         |              |      |
|          |                         |                      | E 1              | See log for N                  | AW-5S for               | soil           |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | _ 2              | descriptions                   |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | E                | Bedrock @ 3                    | 33 ft.                  |                |             | 12             |              |              |             |                         |                     |           |                  |         |              |      |
| 9.0      |                         |                      | 3                |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          | 1                       |                      |                  | Auger refusa<br>drilling using | 11 ( <i>()</i> 39.3 ft. | ., conunue     |             |                | 1            |              | 9           |                         | 11                  |           |                  |         |              |      |
|          |                         |                      | F 1              | Gilling using                  | s am Totaly             |                |             |                |              |              | - 10        |                         |                     |           |                  |         |              |      |
|          |                         |                      | F                | •                              |                         |                |             |                |              | i . I        |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | 5                | EOB @ 82.0                     | ft.                     |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | =                | Well set @ 8                   | 0.0 0                   |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         | 9                    | - 6              | 11 OH 300 (B) 0                | V.V II.                 |                |             |                |              |              | 18          |                         |                     |           |                  |         |              |      |
|          | ,"                      |                      | <u> </u>         |                                |                         |                |             |                |              |              | 0           |                         |                     |           | .2               |         |              |      |
|          |                         |                      | 7                |                                |                         |                |             |                |              |              | 1           |                         |                     | ŀ         |                  |         |              |      |
|          |                         | ľ                    | <u> </u>         |                                |                         |                |             |                |              |              | **          |                         |                     |           |                  | =       |              |      |
|          |                         |                      | 8                |                                |                         |                |             |                |              |              |             | -                       |                     |           |                  |         |              |      |
|          |                         |                      | <u> </u>         |                                | 1 2                     |                |             | 11             |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         | œ                    | 8                |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | <u> -</u>        |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | 10               |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | - 1              |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | 11               |                                |                         |                |             |                |              |              | -           |                         |                     |           |                  |         |              |      |
|          |                         |                      | <u> </u>         |                                |                         |                |             |                |              |              |             |                         | - 11                |           |                  |         | 5-           | •    |
|          |                         |                      | 12               |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | E I              |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | 13               |                                |                         |                |             |                |              | .            |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | [= ,             |                                | 2                       |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
|          |                         |                      | 14               |                                |                         |                |             |                |              |              |             |                         |                     |           |                  |         |              |      |
| I here   | by certi                | fy that              | the informa      | ation on this form is t        | rue and correc          | to the best of | my kno      | worke          |              |              |             |                         | -                   |           | 7.               |         |              | -    |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats

URS Corporation, Madison, WI

Signature

| State of Wis<br>Department   |                 |                | Ro                              | aute To:                  |                    | □ Haz    |        |                 |              | SOIL.                | BORI<br>om 440          |                     | 0G II           | NFOR    | MAT               |                   | '-91                                    |
|--|-----------------|----------------|---------------------------------|---------------------------|--------------------|----------|--------|-----------------|--------------|----------------------|-------------------------|---------------------|-----------------|---------|-------------------|-------------------|---|
|  |                 |                |                                 | Solid Waste<br>Wastewater |                    | Und Wat  |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 |                |                                 | Emergency R               |                    | Oth      |        |                 |              |                      |                         |                     | P               | age 1   | of                | 1                 |   |
| Facility / Pro   | ject Na         | me             |                                 |                           |                    | Lice     | ense/P | ermit/N         | lonitori     | ng Numb              | er                      | E                   | Boring N        |         |                   |                   |   |
| Madison  | n Kip           | p              |                                 |                           |                    | _        |        |                 |              |                      |                         |                     |                 | -5D2    |                   |                   |   |
|  |                 |                | and name of crew                |                           |                    | 1        | _      | Starte<br>06_ / |              | 1                    | Drilling                | ,                   |                 |         | ing Met<br>.5" ID | thod<br>HSA/      |   |
|  |                 |                | -Kevin McCu                     |                           |                    | MM       |        | D               | YY           | Ā                    | 1 M                     | DD /                | YY              |         | ir Ro             |                   |   |
| THE RESIDENCE OF THE PARTY OF T |                 | 50 TL 35 M E S | e am dae Welli (n.).            | Common W<br>MW-5D         |                    | Final    |        | Water           |              | Surfa                | ce Eleva                |                     |                 | Bon     |                   | iameter<br>inches |   |
| Boring Loca  |                 |                |                                 | INI W-SD.                 |                    | 1        |        | Feet M          | SL           | Loca                 | Grid Lo                 | _ Feet I            |                 | -able)  | 10.5              | inches            | • |
| State Plane  | -               |                | N                               |                           | S/C/N              | الا      |        |                 | -            | Loca                 | r Grid Lt               | -                   | J M<br>'n Obbin | Jaurej  |                   |                   | E                                       |
|  | of SV           | 7 1/4 of S     | Section5                        | T <u>7</u> N,1            |                    | 1 Lon    | 7      |                 | _            |                      | Fe                      | et 🛚                | S               |         | Fe                | et 🗀              | W                                       |
| County Dane  |                 |                |                                 |                           | DNR County         | y Code   | -      |                 |              | ity / or V<br>Madiso | -                       |                     |                 |         |                   |                   |   |
|  | 1               | 1              | 1                               |                           |                    |          |        | 1               | 1 1          | WAG150               | ı I                     | 0.70                |                 |         |                   |                   |   |
| Sample   | Z               |                |                                 |                           |                    |          |        | <sub>D</sub>    | ٤            |                      |                         | Soil Pr             | ropertie        | s<br>I  | _                 | ents              |   |
| ğ   g  | Stune           | Fee            |                                 | ock Descr                 |                    |          |        | 일               | Jagn         | ۵                    | ard                     | e =                 |                 |         |                   | E O               |   |
| Number<br>Length<br>Recovered (N)  | Blow Counts (N) | Depth in Feet  |                                 | ologic Orig<br>h Major U  |                    |          | SSS    | Graphic Log     | Well Diagram | PID/FID              | Standard<br>Penetration | Moisture<br>Content | 를 들는<br>다음      | Plastic | P 200             | ROD/Comments      |   |
| 28   | <u> </u>        | ۵              | Asphalt Pari                    |                           |                    |          | -      |                 |              | D.                   | 0) [                    | 20                  |                 |         | -                 | Œ.                |   |
|  |                 | E              |                                 |                           |                    |          |        | 1               |              |                      |                         |                     |                 |         |                   |                   | •                                       |
|  |                 | F 1            | Blind Drill to<br>Well screened |                           |                    | aat      |        |                 |              |                      |                         |                     |                 | 1       |                   |                   |   |
| - 1  |                 | _ 2            | BGS                             | a nom 10J.                | o w 170.0 k        | JCL      |        |                 |              |                      |                         |                     |                 | 1       |                   |                   |   |
| 1  |                 | E              |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | - 3            |                                 |                           |                    |          |        |                 |              |                      |                         |                     | l               |         |                   |                   |   |
|  |                 | E "            |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | - 4            |                                 |                           |                    |          |        |                 |              |                      |                         | ŗ                   |                 | 1       |                   |                   |   |
|  |                 |                |                                 |                           |                    |          |        |                 |              |                      |                         | 1                   |                 |         |                   | × .               |   |
|  | 0               | _ 5            | i                               | 1                         |                    |          |        |                 |              |                      |                         |                     |                 | 1       |                   |                   |   |
|  |                 | =              |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | E 6            |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | - 7            |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | _              |                                 |                           | 8                  |          |        |                 |              |                      |                         |                     | Ì               |         |                   |                   |   |
| 1  |                 | _ 8            |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
| 1  |                 | E              |                                 |                           |                    |          |        |                 |              |                      | -                       |                     |                 |         |                   |                   |   |
| 1  |                 | - 9<br>-       |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | =              |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | = 10           |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | _ 11           |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
| 11   |                 | =              |                                 |                           | -                  |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | 12             |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  | '               | <u> </u>       |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
|  |                 | 13             |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 | 1       |                   |                   |   |
|  |                 | =              |                                 |                           |                    |          |        |                 |              |                      |                         |                     |                 |         |                   |                   |   |
| I hereby cer   | tify that       | the inform     | nation on this form i           | s true and com            | ect to the best of | of my kn | owledg | 8.              |              |                      |                         |                     |                 | 1       | <u></u>           |                   |   |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats

Signature

## SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater Waste Management Remediation/Redevelopment Other Page 1 of 52 Facility Project Name License/Permit/Monitoring Number **Boring Number Madison-Kipp Corporation** MW-5D3 Boring Drilled By: Date Drilling Started Date Drilling Completed **Drilling Method** First Name: Todd Last Name: Schmelfeldt **Mud Rotary** Firm: **Boart Longyear** WI Unique Well No. DNR Well ID No. Well Name Final Static Water Level Surface Elevation Borehole Diameter MW-5D3 841.81Feet MSL 872.34 Feet MSL 8" to 32' & 6" to 237' Local Grid Origin x (estimated: ) or Boring Location Local Grid Location State Plane 399919.9 N 2144191.75 E ΠN ĪΕ Lat , T 7 N, R 10 NW1/4 SW1/4 of Section 5 Long Feet Feet Facility ID County County Code Civil Town/City/or Village 113125320 Madison Dane 13 Sample Soil Properties Length Att. & Recovered (in) Feet Well Diagram Blow Counts Graphic Log Compressive Soil/Rock Description Comments Depth in Surface Samples Strength And Geologic Origin For Moisture Placticity Content cngth USCS Liquid Each Major Unit Limit P 200 E 0.0 1.2 2 ML 3.4 0.0 - 0.5ppm SILT: Black (10YR 2/1), little medium to 3 coarse sand, some slag, metal 3 fragments, loose, moist, slight odor. ML 0.5 - 1.0'SILT: Grades from Gray to Dark yellowish brown (10YR 4/6), trace very 1.0 CH fine sand, moist, slight odor. 1.0 - 1.2 CLAY: Dark yellowish brown (10YR 4/6), little silt, trace very fine sand, high plasticity, soft (H.P. = 0.5-1), moist, no odor. 2.0 1.3 СН 2.71 2.0 - 3.32 ppm CLAY: Dark yellowish brown (10YR 4/6), 2 little silt, trace very fine sand, slag and 2 wood pieces to 2.4', gray mottling, medium plasticity, soft (H.P. = 1.5), moist, no odor. 3.0 4.0 1.6 CH 2.27 4.0 - 5.0CLAY: Dark yellowish brown (10YR 4/6),

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm ARCADIS

126 N. Jefferson St., Suite 400

Milwaukee, WI 53202 (414) 276-7742

This form is authorized by Chapters 281, 283, 289, 291, 293, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

|                                |                                 | 1                  |                      | <del></del>   | I        |             | ····         |             |                         |                     |                 |                     | ige 2 o | JZ               |
|--------------------------------|---------------------------------|--------------------|----------------------|---|----------|-------------|--------------|-------------|-------------------------|---------------------|-----------------|---------------------|---------|------------------|
| Sam                            |                                 |                    |                      |   |          |             | _            |             |                         |                     | Soil Pr         | operties            |         |                  |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts        | Depth in Feet        | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS     | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200   | RQD/<br>Comments |
|                                |                                 | 2 3                | -                    | little silt, trace very fine sand, gray mottling, medium plasticity, soft (H.P. = 1.5), moist, no odor.   |          |             |              |             |                         |                     |                 | Ŷ                   |         |                  |
|                                |                                 |                    | -<br>5.0<br>-        | 5.0 - 5.1' SAND: Reddish brown (5YR 4/4), medium grained, little silt, well sorted, loose, wet, no odor.  | SW<br>CH |             |              |             |                         |                     |                 |                     |         |                  |
|                                |                                 |                    | -<br>-<br>-<br>- 6.0 | 5.1 - 5.6' CLAY: Dark yellowish brown (10YR 4/6), some fine to medium grained sand, trace gravel up to 0.25", little silt, soft (H.P. = 0), high plasticity, sticky, wet, no odor.                                |          |             |              |             |                         |                     |                 |                     |         |                  |
|                                | 1.3'                            | 4<br>9<br>12<br>10 | -                    | 6.0 - 7.3' SAND: Dark yellowish brown (10YR 4/6), very fine to coarse grained, little angular gravel up to 0.5", predominately 0.25", little silt, poorly sorted, loose, moist, no                                | SW       |             |              | 2.35<br>ppm |                         |                     |                 |                     |         |                  |
|                                |                                 |                    | -<br>- 7.0<br>-      | odor.   |          |             |              |             |                         |                     |                 |                     |         |                  |
|                                | 1.6'                            | 7 9                | 8.0                  | <br>8.0 - 9.6'<br>SAND: Dark yellowish brown (10YR 4/6),  | sw       |             |              | 2.09<br>ppm |                         |                     |                 |                     |         |                  |
|                                |                                 | 10<br>9            | -                    | very fine to medium grained, mostly fine, some silt, trace angular gravel up to 0.25", loose, moist, no odor.   |          |             |              |             |                         |                     |                 |                     |         |                  |
|                                | :                               |                    | - 9.0<br>-           |   |          |             |              |             |                         |                     |                 |                     |         |                  |
|                                | 0.0'                            | 12                 | -<br>- 10.0          | <br>10.0 - 12.0'  |          |             |              | NA          |                         |                     |                 |                     |         |                  |
|                                |                                 | 22<br>21<br>26     | -                    | No Recovery.  |          |             |              |             |                         |                     |                 |                     |         |                  |
|                                |                                 |                    | - 11.0<br>-          |   |          |             |              | •           |                         |                     |                 |                     |         |                  |
|                                |                                 |                    | -<br>-<br>-<br>12.0  |   | ,        |             |              |             |                         |                     |                 |                     |         |                  |
|                                | 1.2'                            | 4<br>7<br>19<br>15 | - 12.U               | 12.0 - 13.2' SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly fine grained, some silt, trace angular gravel and sandstone pieces up to 1.5", mostly 0.25 - 0.5", loose, moist, no odor. | SW       |             | <u></u>      | 1.42<br>ppm |                         |                     |                 |                     |         |                  |

| Samp                           |                                 |                    |                  |   |      |             |              |             | ]                       |          | Soil P | roperties           | 3     |                  |
|--------------------------------|---------------------------------|--------------------|------------------|---|------|-------------|--------------|-------------|-------------------------|----------|--------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts        | Depth in Feet    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture | Liquid | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                |                                 |                    | - 13.0<br>-      |   |      |             | £            |             |                         |          |        |                     |       |                  |
|                                | 1.4'                            | 7<br>9             | -<br>- 14.0      | 14.0 - 15.4'<br>SAND: Dark yellowish brown (10YR 4/6),  | sw   |             |              | 3.47<br>ppm |                         |          |        |                     | -     |                  |
|                                |                                 | 12<br>14           | -<br>-<br>- 15.0 | very fine to medium grained, mostly fine grained, trace angular gravel and sandstone pieces up to 1.5", mostly 0.13 - 0.5", loose, moist, no odor.  |      |             |              |             |                         |          |        |                     |       |                  |
|                                |                                 |                    | -                |   |      |             |              |             |                         |          |        |                     |       |                  |
|                                | 1.4'                            | 5<br>9<br>15<br>17 | - 16.0<br>-      | 16.0 - 17.4' SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly fine grained, little silt, trace angular gravel and sandstone pieces up to 1.5", mostly                       | SW   |             |              | 2.37<br>ppm |                         |          |        |                     |       |                  |
|                                |                                 |                    | -<br>- 17.0<br>- | 0.25 – 0.5", poorly sorted, loose, wet, no odor.  |      |             |              |             |                         |          |        |                     |       |                  |
|                                | 1.2'                            | 12                 | -<br>-<br>18.0   | 18.0 - 19.2'  | SW   |             |              | 2.01        |                         |          |        |                     |       | **               |
|                                |                                 | 17<br>30<br>19     | -                | SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly fine grained, little silt, trace clay, trace angular gravel up to 1", mostly 0.13", cohesive, poorly sorted, wet, no odor. |      |             |              | ppm         |                         |          |        |                     |       |                  |
|                                |                                 |                    | - 19.0<br>-<br>- |   |      |             |              |             |                         |          |        |                     |       |                  |
|                                | 1.1'                            | 12<br>15<br>17     | - 20.0           | 20.0 - 21.1' SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly fine  | sw   |             |              | 2.41<br>ppm |                         |          |        |                     |       |                  |
|                                |                                 | 18                 | 21.0             | grained, little silt, trace clay, trace angular gravel up to 1.5", mostly 0.25 – 0.5", cohesive, poorly sorted, wet, no odor.   |      |             |              |             |                         |          |        |                     | 51    |                  |

|   |               | T   |          |             | 1            |             |                         |                     | C 11 D          |                     | ige 4 o | <del>                                      </del> |
|---|---------------|---|----------|-------------|--------------|-------------|-------------------------|---------------------|-----------------|---------------------|---------|---|
| Sample  |               |   |          |             |              |             |                         |                     | Soil Pr         | operties            |         |   |
| Fracture<br>Surface<br>Samples<br>Length Att. &<br>Recovered (in) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS     | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200   | RQD/<br>Comments                                  |
| 1.0' 65 20 32 Samp Secove Secove Blow (Blow (Blow (Blow (Brack))) | 22.0          | Each Major Unit    22.0 - 22.5'   SAND: Dark yellowish brown (10YR 4/6), very fine to medium grained, mostly fine grained, little slit, trace clay, trace angular gravel 0.25 - 0.5", cohesive, poorly sorted, wet, no odor.    22.5 - 23.0'   SAND: Dark yellowish brown (10YR 4/6), fine to medium grained, little slit, trace rounded gravel up to 1", loose, poorly sorted, wet, no odor.    24.0 - 25.0'   SAND: Dark yellowish brown (10YR 4/6), fine to medium grained, trace slit, some rounded to angular (fractured) gravel up to 1.5", loose, wet, no odor.    26.0 - 38.0'   BLIND DRILL: Refusal at 26'. Blind drilled to 29.0' where Boart reported competent bedrock. Continued blind drilling to 38'. 6" casing set at 32' bgs. | SW SW SW |             | Well D       | 3.61<br>ppm | Compr                   | Moistr              | Liquid          | Plactic             | P 200   | RQD/<br>Comm                                      |
|   |               |   |          |             |              |             |                         |                     |                 |                     |         |   |

| Sample  |             |               |   |      |             |              |     |                         |                     | Soil Pr         | operties            |       |                  | Ī   |
|---|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|-----|
| Fracture<br>Surface<br>Samples<br>Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |     |
|   |             | - 30.0        |   |      |             |              |     |                         |                     |                 |                     |       |                  |     |
|   |             | - 31.0<br>-   |   |      |             |              |     |                         |                     |                 |                     |       |                  |     |
|   |             | - 32.0        |   |      |             |              |     |                         | 2)                  |                 |                     |       |                  |     |
|   |             | - 33.0        |   |      |             |              | 2   |                         |                     |                 | 7 7 000000          |       | ×.               | 100 |
|   |             | - 34.0        |   |      |             |              |     |                         |                     |                 |                     |       |                  |     |

|   | Т           | Т             |   |      | ·<br>                                  |              |            |                         |                     | Coll De- | operties         | ge 6 01 | 72               |
|---|-------------|---------------|---|------|--|--------------|------------|-------------------------|---------------------|----------|------------------|---------|------------------|
| Fracture Surface Samples Length Att. & el | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                            | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content |          | Placticity Index | P 200   | RQD/<br>Comments |
|   |             | - 35.0        |   |      |  |              |            |                         |                     |          |                  |         |                  |
|   |             | - 36.0        |   |      |  |              |            |                         |                     |          |                  |         |                  |
|   |             | - 37.0        |   |      |  |              |            |                         |                     |          |                  |         |                  |
| 1.0                                       |             | 38.0          | 38.0 - 98.2 Tunnel City Group Lone Rock Formation  SANDSTONE: very fine to fine grained, moderately hard, moderately to well cemented, highly jointed, joints are horizontal to low angle, cross to irregular bedding, laminated to thin beds, rip-up |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              | 1.4<br>ppm |                         |                     |          |                  |         | 29.8%<br>Poor    |

|                                |                                 |             |               |  |        |  |              |   |                         |                     |          |                     | ige 7 o: | 1 32             |
|--------------------------------|---------------------------------|-------------|---------------|--|--------|--|--------------|---|-------------------------|---------------------|----------|---------------------|----------|------------------|
| Sam                            |                                 |             |               |  |        |  |              |   |                         |                     | Soil Pro | operties            |          |                  |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS   | Graphic Log  | Well Diagram | FID                                     | Compressive<br>Strength | Moisture<br>Content | Liquid   | Placticity<br>Index | P 200    | RQD/<br>Comments |
| (38.6-<br>38.7)<br>VOCs<br>BET |                                 |             |               | clasts, trace bioturbation, trace pores, secondary mineralization, trace iron nodules, moderate to high energy nearshore environment.  |        | < < < < < < < < < < < < < < < < < < <                        |              |   |                         |                     |          |                     |          |                  |
| (39.7-<br>39.8)                | 5.0'                            |             | 39.0          | 38.0 – 38.9' SANDSTONE: Pink (7.5YR 7/3), Sand: 90%, very fine to fine grained, subangular to subround, Glauconite: 10%, sandstone is well sorted, moderately hard, moderately to well cemented, quartz cement, trace hairline fractures with secondary mineralization and sand infilling, iron staining on fracture faces, trace bioturbation, trace iron nodules, secondary mineralization throughout.                         |        | 2222222  |              | 0.0<br>ppm                              |                         | 9.4%                |          | :                   |          | 47%<br>Poor      |
| VOCs<br>BF                     |                                 |             | - 40.0        | 38.9 – 39.0' SANDSTONE: Light brown (7.5YR 6/4), Sand: 90%, very fine grained, subangular to subround, Glauconite and Clay: 10%, sandstone is well sorted, hard, well cemented, irregular bedding, trace slightly weathered vertical hairline fracture with secondary mineralization and sand infilling, trace to little rip-up clasts containing parent material with iron staining.  |        | 2012<br>2012<br>2012<br>2012<br>2012<br>2012<br>2012<br>2012 |              |   |                         |                     |          |                     |          |                  |
| (41.1-<br>41.2)                |                                 |             | - 41.0        | 39.0 - 39.8' SANDSTONE: Brown (7.5YR 5/4), Sand: 95%, very fine to fine grained, subangular to subround, Clay: 5%, sandstone is well sorted, moderately cemented, moderately hard, irregular bedding, little bioturbation where burrows are filled with clay and iron precipitate, trace pores throughout.   |        | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                       |              |   |                         |                     |          |                     |          |                  |
| VOC'S<br>BF<br>(41.8-<br>41.9) |                                 |             | -             | 39.8 - 40.2' SANDSTONE: Brown (7.5YR 5/4), Sand: 90%, very fine to medium grained, subangular to subround, Glauconite and clay: 10%, sandstone is moderately well sorted, moderately cemented, moderately hard, laminated cross to irregular bedding, green clay in thin partings, intensely jointed, iron staining on outside of core as well as on fracture surfaces, secondary mineralization of liron.                       |        | 75/49<br>A 1 19<br>75/49                                     | alexicolor.  | 200000000000000000000000000000000000000 |                         |                     |          |                     |          |                  |
| VOCs<br>BET                    |                                 |             | - 42.0        | 40.2 - 41.2' SANDSTONE: Gray (10YR 6/1), Sand: 90%, very fine to medium grained, subangular to subround, Glauconite: 10%, sandstone is moderately well sorted, moderately hard, moderately cemented, iron staining on outside of core as well as on fracture surfaces, ripup clasts containing parent material, intensely jointed, joints display iron staining, secondary mineralization, and very fine to fine sand infilling. |        | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~                      |              |   |                         | 210                 |          |                     |          |                  |
|                                |                                 |             |               | 41.2 - 41.5' SANDSTONE: Gray (10YR 5/1), Sand: 90%, very fine to medium grained,   | i<br>i | > >  | 200          | 0                                       |                         |                     |          |                     |          |                  |

| Sam                             |                                 |             |                  |   |      |   |              |            |                         | -                   | Soil Pr         | operties            | 1     |                  |
|---------------------------------|---------------------------------|-------------|------------------|---|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log   | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (43.4-<br>43.5)<br>VOCs<br>BF   |                                 |             | 43.0             | subangular to subround, Glauconite: 10%, sandstone is moderately well sorted, moderately hard, moderately cemented, laminated planar beds, clay in thin partings, intensely jointed, hairline vertical fracture, fractures display very fine to fine sand infilling, secondary mineralization.  41.5 - 41.6' SANDSTONE: Pink (7.5YR 7/3), Sand 95%, very fine to fine grained, subangular to subround, Clay 5%, sandstone is very well sorted, hard, well cemented, no discernible beds, iron |      | · · · · · · · · · · · · · · · · · · ·   |              |            |                         |                     |                 |                     |       |                  |
| (44.2-<br>44.3)<br>VOCs<br>BET  | 2.4'                            |             | - 44.0           | staining on outside of core in bands, sharp contact with above and below.  41.6 - 42' SANDSTONE: Brown (7.5YR 5/4), Sand: 90%, very fine to medium grained, subangular to subround, Clay and Glauconite: 10%, sandstone is moderately sorted, moderately hard, moderately cemented, laminated cross beds, weathered vertical hairline fractures.  |      |   |              | 0.0<br>ppm |                         |                     |                 |                     |       | 20%<br>Poor      |
| (45.3-<br>45.4)<br>VOCs<br>BET  |                                 |             | - 45.0<br>-      | 42 - 43.5' SANDSTONE: Brown (7.5YR 5/4), Sand: 90%, very fine to coarse sand, subangular to subround, Glauconite: 10%, sandstone is poorly sorted, well cemented, hard, trace pores to vugs, calcite precipitate and iron staining, iron staining on outside of core as well as on fracture surfaces, rip-up clasts throughout containing parent material.  |      | 7.57.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.57<br>2.33.5 |              |            |                         | E                   |                 | -                   |       |                  |
| (45.6-<br>46.1)<br>PHYS<br>PROP |                                 |             | -<br>-<br>- 46.0 | 43.5 - 44' SANDSTONE: Brown (7.5YR 5/4), Sand: 95%, very fine to medium grained, subangular to subround, Clay: 5%, sandstone is moderately sorted, moderately cemented, moderately hard, trace iron nodules, rip-up clasts containing parent material, very thin cross to irregular beds.   |      |   |              |            |                         | 8.2%                |                 |                     |       |                  |
| (46.1-<br>46.2)<br>VOCs<br>BF   |                                 |             | -                | 44.0 - 44.7' SANDSTONE: Pale brown (10YR 6/3), Sand: 90%, very fine to medium grained, subangular to subround, Clay and glauconite: 10%, sandstone is moderately sorted, poorly cemented, soft, laminated to very thin planar beds with thin clay partings, weathered horizontal fracture surfaces.   |      | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   |              |            |                         |                     |                 | a                   |       |                  |
|                                 |                                 |             | -<br>- 47.0      | 44.7 - 45.4' SANDSTONE: Light brown (7.5YR 6/3), Sand: 95%, very fine to medium, mostly medium, subangular to subround, Glauconite: 5%, sandstone is moderately sorted, poorly cemented, soft, friable laminated cross to irregular beds, cross beds are shallow angle up to 20o, iron staining on outside of core as well as on fracture surfaces, glauconite presence increases with depth, beds become   |      |   |              |            |                         |                     |                 |                     |       |                  |

| Sample   | ,              |             |                |   | T    |             |              |            |                         |                     | Soil Pr         | operties |       |                       |
|--|----------------|-------------|----------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|----------|-------|-----------------------|
|  | Recovered (in) | Blow Counts | Depth in Feet  | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | ity      | P 200 | RQD/<br>Comments      |
|  |                |             | - 48.0         | horizontal at base, siltstone from 45.2-45.3'.  45.4 - 46.3' SANDSTONE: Reddish yellow (7.5YR 6/6), Sand: 80%, very fine to fine grained, subangular to subround, Clay: 20%, sandstone is moderately well sorted, moderately hard, moderately weathered, well cemented with clay and iron precipitate, iron staining on outside of core as well as on fracture surfaces, laminated planar to irregular beds, little pores to pits throughout, horizontal fractures filled with secondary iron precipitation and very fine sand and clay.                                |      |             |              |            |                         |                     |                 |          |       |                       |
| (49.8-<br>49.9)<br>VOCs<br>BET                                 | .9'            |             | - 49.0<br>50.0 | 49.0 - 50.4' SANDSTONE: Light gray (10YR 7/2), Sand: 85%, very fine to fine grained, subangular to subround, Clay: 15%, sandstone is well sorted, very soft, moderately weathered, poorly cemented, iron staining on outside of core as well as on fracture surfaces, laminated planar beds, beds are slightly undulating, little pits throughout, horizontal fractures filled with secondary iron precipitation and very fine sand and clay, trace to little burrows filled with clay and iron precipitate.  |      |             |              | 0.0<br>ppm |                         |                     |                 |          |       | 13.69<br>Very<br>Poor |
| (50.8-<br>50.9)<br>VOCs<br>BF<br>(51.1-<br>51.2)<br>VOCs<br>f3 |                |             | - 51.0         | 50.4 - 51.3' SANDSTONE: Yellowish brown (10YR 7/2), Sand: 95%, very fine to fine grained, trace medium sand, subangular to subround, Glauconite: 5%, sandstone is moderately well sorted, moderately hard, moderately cemented, irregular bedding, rip-up clasts containing parent material with iron staining, weathered hairline fractures throughout, trace pores.    51.3 - 51.5'   SANDSTONE: Strong brown (7.5YR 5/6), Sand: 95%, very fine to fine grained, mostly fine, subangular to subround, Glauconite: 5%, sandstone is well sorted, moderately hard, well |      |             |              |            |                         |                     |                 |          |       |                       |

| Sam                            |                                 |             |  | 11  |      |  |              | _          |                         |                     | Soil Pr         | operties            |       |                  |
|--------------------------------|---------------------------------|-------------|--|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet  | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log                              | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                |                                 |             | -<br>- 52.0  | containing parent material.  51.5 - 52.2' SANDSTONE: Strong brown (7.5YR  |      | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   | 55555        |            |                         |                     |                 |                     |       |                  |
| (52.2-<br>52.3)<br>VOCs<br>BF  |                                 |             | -  | 5/6), Sand: 95%, very fine to medium grained, mostly fine, subangular to subround, Glauconite: 5%, sandstone is moderately sorted, moderately hard to hard, iron staining on core, irregular bedding, little pores to pits throughout, little to some rip-up clasts containing parent material with iron staining.  |      | < < <                                    |              |            |                         |                     |                 |                     | E.    |                  |
| (52.9-<br>53)<br>VOCs<br>AF    |                                 |             | -<br>- 53.0  | 52.2 - 52.9' SANDSTONE: Light brownish gray (10YR 6/2), Sand: 85%, very fine to fine grained, subangular to subround, Clay and glauconite: 15%, sandstone is moderately sorted, moderately hard, moderately cemented, paper to laminated planar beds of alternating sandstone and clay in partings, gradational transition into below.  |      | < < < < < < < < < < < < < < < < < < <    |              |            |                         |                     |                 |                     |       |                  |
|                                |                                 |             | 54.0   | 52.9 - 53.2' SANDSTONE: Pink (7.5YR 7/3), Sand: 95%, very fine to fine grained, mostly fine, subangular to subround, Glauconite: 5%, sandstone is well sorted, moderately hard, well cemented, quartz matrix, iron staining on core as well as on fracture surfaces, no discernible bedding, trace pores to pits with calcite and iron precipitation, trace rip-up clasts containing parent material, trace iron healed hairline fractures. |      | 18 18 18 18 18 18 18 18 18 18 18 18 18 1 |              |            |                         |                     |                 |                     |       |                  |
|                                | 3.9'                            |             |  | 53.2 - 53.9' SANDSTONE: Light brown (7.5YR 6/4), Sand: 90%, very fine to medium grained, subangular to subround, Clay and glauconite: 5%, sandstone is moderately sorted, soft to moderately hard, moderately cemented, laminated to very thin planar to cross beds, iron staining on core as well as on fracture faces.  |      |  |              | 0.0<br>ppm |                         |                     |                 |                     |       | 36.5%<br>Poor    |
| (54.7-<br>54.8)<br>VOCs<br>BF  |                                 |             | -<br>- 55.0  | 54.0 – 54.2' SANDSTONE: Light brown (7.5YR 6/4), Sand: 90%, very fine to medium grained, subangular to subround, Clay and glauconite: 5%, sandstone is moderately sorted, soft to moderately hard, moderately cemented, laminated to very thin planar to cross beds, iron staining on core as well as on fracture faces.  |      | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0    |              |            |                         |                     |                 |                     |       |                  |
|                                |                                 |             | and demand on the second of th | 54.2 – 55.8' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subround, Clay and iron precipitate: 20%, sandstone is moderately sorted, moderately hard to hard, fine grained, moderate weathering on outside of core as well as on horizontal open fractures, laminated to thin bedding, well cemented with quartz   |      |  |              |            |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 56.0   | and iron precipitate, iron staining on outside of core as well as on fracture surfaces, little pores to pits throughout,  |      | /////<br>\\\\\\                          |              |            |                         |                     |                 |                     |       |                  |

|   | , -                             |             |               |   |      |  |              |            | <u> </u>                |                     | a :: =          |                     | age 11 | of 52                 |
|---|---------------------------------|-------------|---------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|-----------------------|
| Sam   |                                 |             | ي ا           |   |      |  |              |            |                         |                     | Soil Pr         | operties            | S<br>T | -                     |
| Fracture<br>Surface<br>Samples                                | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log  | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments      |
| (56.2-<br>56.3)<br>VOCs<br>f2<br>(57-<br>57.1)<br>VOCs<br>BET |                                 |             | - 57.0        | pits contain secondary mineralization of calcite grains and iron precipitate, secondary mineralization of iron precipitate in healed horizontal fractures, intensely to highly jointed, open horizontal fractures are rough and irregular displaying in filling of very fine white sand and iron precipitate.  55.8 – 58.9' SANDSTONE: Light brown (7.5YR 6/4), Sand: 90%, very fine to medium grained, subangular to subround, Clay and glauconite: 5%, sandstone is moderately sorted, soft to moderately hard, moderately cemented, laminated to very thin planar to cross beds, iron staining on core as well as on fracture faces. |      | 7/2/2/2<br>2/18/2<br>2/18/2<br>2/18/2<br>2/18/2<br>2/18/2<br>2/18/2<br>2/18/2<br>2/18/2  | ±            |            |                         |                     |                 |                     |        |                       |
|   |                                 |             | - 58.0        |   |      | 7.9.69.2<br>2.3.74.3<br>7.9.69.2<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74.3<br>2.3.74 |              |            |                         |                     |                 |                     |        |                       |
|   | 3.8'                            |             | 59.0          | 59.0 – 59.9' SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, very fine to fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, very slight weathering displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, little fine grained   |      | 7/12/  |              | 0.0<br>ppm |                         |                     |                 |                     |        | 18.3%<br>Very<br>Poor |
| (59.7-<br>59.8)<br>VOCs<br>BET                                |                                 |             | - 60.0        | glauconite, trace pits and pores throughout, bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and iron precipitate, intensely jointed, well cemented, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  59.9 – 61.8' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron  |      | 1/2/12/2 ~~ ~~   |              |            |                         |                     |                 |                     | 5      |                       |
|   |                                 |             |               | precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron  |      | ~~~~   |              |            |                         |                     |                 |                     |        |                       |

|                                |                                 |             | ,             |  | ı —  |   | ,  |            |                         |                     |                 |                     | ge 1 <b>2</b> | J J Z             |
|--------------------------------|---------------------------------|-------------|---------------|--|------|---|--|------------|-------------------------|---------------------|-----------------|---------------------|---------------|-------------------|
| Samp                           |                                 |             |               |  |      |   |  |            |                         |                     | Soil Pro        | operties            |               |                   |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log                             | Well Diagram                             | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200         | RQD:/<br>Comments |
| (61.1-<br>61.2)<br>VOCs<br>BF  |                                 |             | - 61.0        | quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to pits throughout, pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation, secondary mineralization of iron precipitate in healed horizontal fractures, intensely to highly jointed, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine white sand and iron precipitate. |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |  |            |                         | 9.9%                |                 |                     |               |                   |
| (62.1-<br>(62.2)<br>VOCs<br>BF |                                 |             | - 62.0        | 61.8 – 63.1' SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, very fine to fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, very slight weathering displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, little fine grained glauconite, trace pits and pores throughout, bioturbation visible on open  |      | ~ ~ / 4/ 14/ 14/ 14/                    |  |            |                         |                     |                 |                     |               |                   |
|                                |                                 |             | -<br>- 63.0   | horizontal fracture faces and on outside of core, burrows are filled with clay and iron precipitate, highly jointed, well cemented, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  63.1 – 63.7'   |      | 2/2//2/                                 |  |            |                         |                     |                 |                     |               |                   |
|                                |                                 |             |               | SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to pits throughout, pits contain secondary  |      | ~~~~~~~~                                | \$4.5545.5545.5545.5545.5545.5545.5545.5 |            |                         |                     |                 |                     |               |                   |
| 64.25-<br>64.5)<br>VOCs<br>f3  | 3.9'                            |             | - 64.0        | mineralization of euhedral calcite grains and iron precipitate, trace bioturbation, highly jointed, secondary mineralization of iron precipitate in healed horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine white sand and iron precipitate.  |      | 10000                                   |  | 0.0<br>ppm |                         | 8.5%                |                 |                     |               | 25%<br>Poor       |
| 65)<br>PHYS<br>PROP            |                                 |             | -             | 64.0 – 64.3' SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, very fine to fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, sandstone is very well sorted, moderately  |      | ~~~~                                    | 5555555                                  |            |                         |                     |                 |                     |               |                   |

| ď                              | 1 <sub>a</sub> T                |             |                |  |      |   |              |            | Ι                       |                     | Call D          |                     | ige 13 |                    |
|--------------------------------|---------------------------------|-------------|----------------|--|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|--------------------|
| Samp                           |                                 | 525         | *              |  |      |   |              |            |                         |                     | SUII Pr         | operties            |        | -                  |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet  | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments   |
| 1                              | ı                               |             | 65.0<br> -     | hard, fine grained, very slight weathering   | li.  |   | Die Die      | î          |                         | í                   | l               |                     |        | ]                  |
| (65.3-<br>65.4)<br>VOCs<br>BF  |                                 |             | -              | displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, little fine grained glauconite, trace pits and pores throughout, bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and iron precipitate, highly jointed, well cemented, horizontal fractures are smooth and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  |      | ~~~~~~                                  |              | ě          |                         | T                   |                 |                     |        |                    |
| (66.4-<br>66.5)<br>VOCs<br>BET |                                 |             | - 66.0<br>67.0 | 64.3 – 65.7' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to pits throughout, pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation, highly jointed, secondary mineralization of iron precipitate on horizontal fractures,                                       |      | 13/3/3/3/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |                 |                     |        |                    |
| 67.1)<br>VOCs<br>BF            |                                 |             |                | horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine white sand and iron precipitate.  65.7 – 66.6' SANDSTONE: Very pale brown (10 YR 8/4) to brownish yellow (10 YR 6/8).  |      | ~~~~~                                   |              |            |                         |                     |                 |                     |        |                    |
|                                |                                 |             | - 68.0         | Sand: 95%, very fine to fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, little fine grained glauconite, bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and iron precipitate, bands of heavier oxidized iron staining throughout, highly jointed, well cemented, horizontal fractures are irregular and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate. |      | ~~~~~~~~~~~                             |              |            |                         |                     |                 | 0.6                 |        |                    |
|                                | 2.4'                            |             | 69.0<br>       | 66.6 – 67.4' SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures,  |      |   |              | 0.0<br>ppm |                         |                     |                 |                     |        | 0%<br>Very<br>Poor |

|                                  |                                 |             |               |  |      |  | )            |     |                         |                     |                 |                     | ge 14 | of 52            |
|----------------------------------|---------------------------------|-------------|---------------|--|------|--|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| San                              |                                 |             |               |  |      |  |              |     |                         |                     | Soil Pro        | operties            |       |                  |
| Fracture<br>Surface ·<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log                              | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (69.9-<br>70)<br>VOCs<br>BET     |                                 |             | -<br>- 70.0   | medium bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to pits throughout, pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation, highly jointed, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |      | 2/12/12/12/12/12/12/                     |              |     |                         |                     |                 |                     |       |                  |
| (70.8-<br>70.9)<br>VOCs<br>BET   |                                 |             | - 71.0        | SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderately weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding as well as laminated cross beds, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pores to vugs throughout, vugs and pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation, highly jointed, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate. |      | / 1/ 12/ 12/ 12/ 12/ 12/ 12/ 12/ 12/ 12/ |              |     |                         |                     |                 |                     |       |                  |
|                                  |                                 |             | - <b>72.0</b> | 69.7 – 71.2' SANDSTONE: Very pale brown (10 YR 8/4) to brownish yellow (10 YR 6/8). Sand: 95%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, little pits to vugs, pores and vugs contain secondary mineralization of calcite and  |      | 2/2/2/2/2/                               |              |     | 39                      | ,                   |                 |                     |       |                  |
|                                  |                                 |             | - <b>73.0</b> | iron precipitate, bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and iron precipitate, bands of heavier oxidized iron staining throughout, highly jointed, well cemented, horizontal healed hairline fractures are filled with iron precipitate, horizontal fractures are irregular and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  74.0 – 74.8' SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is  |      |  |              |     |                         | 9                   |                 |                     |       |                  |

| Sam                            |                              |             |               |  | Π    | Τ                                     |              |            |                         |                     | Soil Pro        | operties            | ige 15 |                   |
|--------------------------------|------------------------------|-------------|---------------|--|------|---------------------------------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|-------------------|
| Fracture<br>Surface<br>Samples | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                           | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD./<br>Comments |
|                                | 5.0'                         |             | 74.0          | moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding as well as laminated cross beds, well cemented with quartz and iron precipitate, iron   |      | 12.27                                 |              | 0.0<br>ppm |                         |                     |                 |                     |        | 35%<br>Poor       |
| (74.5-<br>74.6)<br>VOCs<br>BF  |                              |             | - 75.0        | precipitation on outside of core as well as on fracture surfaces, little pores to vugs throughout, vugs and pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, moderately jointed, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |      |                                       |              |            |                         |                     |                 |                     | 25     |                   |
| (75.7-<br>75.8)<br>VOCs<br>BET |                              |             | - 76.0        | 74.8 – 75.5' SANDSTONE: Very pale brown (10 YR 8/4) to brownish yellow (10 YR 6/8). Sand: 80%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 20%, sandstone is moderately sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal fractures, no discernible bedding visible due to severe bioturbation and iron precipitation, little pits to vugs, pores and vugs contain secondary mineralization of calcite and iron precipitate, severe bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and rimmed by iron precipitate, bands of heavier oxidized iron staining |      | 1/2/12/12/12/                         |              |            |                         |                     |                 |                     |        |                   |
| (76.6-<br>76.7)<br>VOCs<br>BET |                              |             | -             | throughout, highly jointed, well cemented, horizontal healed hairline fractures are filled with iron precipitate, horizontal fractures are irregular and display in filling of clay and very fine sand as well as secondary mineralization of iron precipitate.  |      |                                       |              |            |                         |                     |                 |                     |        |                   |
|                                |                              |             | 77.0          | 75.5 – 76.7' SANDSTONE: Very pale brown (10 YR 8/4) to brownish yellow (10 YR 6/8). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, sandstone is very well sorted, moderately hard, fine grained, slight weathering displayed on outside of core as well as on horizontal fractures, horizontal very thin beds as well as laminated shallow angled cross beds, laminated beds of clay, little pits, bioturbation visible on open horizontal fracture faces and on outside of core, burrows are filled with clay and iron   |      | ~~~~~~~~~~                            |              | 54         |                         |                     |                 |                     |        |                   |
| (77.8-<br>77.9)<br>VOCs<br>BF  |                              |             | <b>– 78.0</b> | precipitate, highly jointed, well cemented,<br>horizontal healed hairline fractures are<br>filled with iron precipitate and clay,<br>horizontal fractures are irregular and<br>display in filling of clay and very fine sand<br>as well as secondary mineralization of   |      | ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? |              |            |                         |                     |                 |                     |        |                   |

| Sam                            |                                 |             |               |   |      |   |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|--------------------------------|---------------------------------|-------------|---------------|---|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (78.5-<br>78.6)<br>VOCs<br>f3  |                                 |             | 79.0          | iron precipitate.  76.7 – 79.0' SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding, well cemented with quartz and iron precipitate, iron  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |                 |                     |       |                  |
| (79.7-<br>79.8)<br>VOCs<br>BET | 4.4'                            |             | -             | precipitation on outside of core as well as on fracture surfaces, little fine grained glauconite, little pores to vugs throughout, vugs and pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, highly jointed, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.   |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              | 0.0<br>ppm |                         |                     |                 |                     |       | 13.39<br>Poor    |
| (80.5-<br>80.6)<br>VOCs<br>BET |                                 |             | - 80.0        | 79.0 – 80.4' SANDSTONE: Very pale brown (10 YR 7/3). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering on outside of core as well as on horizontal open fractures, laminated bedding, well cemented with quartz and clay, laminated clay beds, bioturbation have burrows that are filled with clay and rimmed with iron precipitate, iron   | 7    | ~ |              |            |                         |                     |                 |                     |       |                  |
|                                |                                 |             | - 81.0        | precipitation on outside of core as well as on fracture faces, little pores to pits throughout, intensely jointed, secondary mineralization of iron precipitate on horizontal fractures, healed horizontal hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  80.4 – 80.7'   | К    | ~~~~~~~                                 |              |            |                         |                     | į               |                     |       |                  |
| (81.9-<br>82)<br>VOCs<br>BET   | -                               |             | - 82.0        | SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 80%, fine grained, subangular to subrounded, Clay and iron precipitate: 20%, sandstone is moderately well sorted, moderately hard to hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little fine grained glauconite, little pores to vugs throughout, vugs and pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace |      | (5/5/5/6/                               |              |            |                         |                     |                 |                     |       |                  |

| Sam  | nle                          |             |               |  | <u> </u> |   |              |            |                         |                     | Soil Pro        | operties         | ge 17 |                  |
|--|------------------------------|-------------|---------------|--|----------|---|--------------|------------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Fracture<br>Surface<br>Samples                       | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS     | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity Index | P 200 | RQD/<br>Comments |
| (82.7-<br>82.8)<br>VOCs<br>AF                        |                              |             | -<br>- 83.0   | clay and rimmed by iron precipitate, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |          |   |              |            |                         | 13.0%               |                 |                  |       |                  |
|  |                              |             | 84.0          | SANDSTONE: Very pale brown (10 YR 7/3). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering on outside of core as well as on horizontal open fractures, very thin to thinly bedded, well cemented with quartz and clay, rip up clasts of clay and iron precipitation throughout, bioturbation have burrows that are filled with clay and rimmed with iron precipitate, iron precipitation on |          |   |              |            |                         |                     | S               |                  |       |                  |
| (84.6-   | 4.2'                         |             | -             | outside of core as well as on fracture faces, little pores to pits throughout, intensely jointed, secondary mineralization of iron precipitate and euhedral calcite on horizontal fractures, healed horizontal hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |          | 1/2/12/12/1                             |              | 0.0<br>ppm |                         |                     |                 |                  |       | 21.7%<br>Poor    |
| 84.7)<br>VOCs<br>BF<br>(85-<br>85.6)<br>PHYS<br>PROP |                              |             | 85.0          | 81.8 – 83.2' SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 90%, fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding to laminated cross beds, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little fine grained glauconite throughout,       |          | < ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? |              |            |                         | 14.4%               |                 |                  |       |                  |
| (85.8-<br>85.9)<br>VOCs<br>BET                       |                              |             | - 86.0        | little pores to vugs throughout, vugs and pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.                            |          |   |              |            |                         |                     |                 |                  |       |                  |
| (86.9-   |                              |             | -             | 84.0 – 84.6 SANDSTONE: Yellowish brown (10 YR 5/4). Sand: 90%, fine grained, subangular to subrounded, Clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard, fine grained, moderate weathering displayed on outside of core as well as   |          |   |              |            |                         |                     |                 |                  |       |                  |

| Sample                                |                |               |   |      |   |              |            |                         |                     | Soil P | roperties | ige 18 |                       |
|---------------------------------------|----------------|---------------|---|------|---|--------------|------------|-------------------------|---------------------|--------|-----------|--------|-----------------------|
|                                       | Recovered (in) | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | _      | ity       | P 200  | RQD/<br>Comments      |
| 87)<br>VOCs<br>BET<br>(87.8-<br>87.9) |                | - 87.         | thin bedding to laminated cross beds, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pits to pores throughout, pits contain secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are filled with iron precipitate, open horizontal fractures are rough and irregular   |      | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |              |            |                         |                     |        |           |        |                       |
| VOCS<br>BF                            |                | - 88.         | displaying in filling of very fine sand and clay as well as iron precipitate.  84.6 – 85.0' SANDSTONE: Very pale brown (10 YR 8/3) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding to no discernible bedding due to bioturbation, horizontal hairline fractures, healed horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, severe bioturbation where burrows are filled with clay and rimmed |      | ~~~~~~~~~~                              |              |            |                         |                     |        |           |        |                       |
| (89.3-<br>89.4)<br>VOCs<br>BET        | 4'             | 89.           | with iron precipitate, trace pits to vugs, pores and vugs have secondary mineralization of iron precipitate and calcite, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  85.0 – 85.6' PHYSICAL PROPERTIES SAMPLE   |      | 332222                                  |              | 0.0<br>ppm |                         |                     |        |           |        | 11.7%<br>Very<br>Poor |
| (90.3-<br>90.4)<br>VOCs<br>BF         |                | - 90          | fine grained, moderate weathering displayed on outside of core as well as on horizontal open fractures, horizontal thin bedding to laminated cross beds, well cemented with quartz and iron precipitate, iron precipitation on outside of core as well as on fracture surfaces, little pits to pores throughout, pits contain   |      |   |              |            |                         |                     |        |           | 12     |                       |
|                                       |                | -<br>- 91     | secondary mineralization of euhedral calcite grains and iron precipitate, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, secondary mineralization of iron precipitate on horizontal fractures, horizontal healed hairline fractures are  |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |        |           |        |                       |

| Sam                            | nle                             |             |               |  |      |   |              |            |                         |                     | Soil Pr         | operties            | ige 19 | 01 32                 |
|--------------------------------|---------------------------------|-------------|---------------|--|------|---|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|-----------------------|
| Sam                            |                                 | ts          | #             |  |      | on no                                   |              |            | , e                     |                     | JOH FT          | oper 1108           |        | -                     |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments      |
| (91.9-<br>92)<br>VOCs<br>BET   |                                 |             | -<br>- 92.0   | SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, fine grained, subangular to subrounded, Clay and iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, very slight weathering displayed on outside of core as well as on horizontal open fractures, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, secondary mineralization of iron precipitate on horizontal fractures, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  89.0 – 89.3' SANDSTONE: Very pale brown (10 YR |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |                 |                     |        |                       |
| (92.9-<br>93)<br>VOCs<br>f3    |                                 |             | - 93.0        | 8/2). Sand: 95%, fine grained, subangular to subrounded, Clay and iron precipitate: 5%, sandstone is very well sorted, moderately hard, fine grained, very slight weathering displayed on outside of core as well as on horizontal open fractures, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, trace glauconite lenses, secondary mineralization of iron precipitate on horizontal fractures, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |      | ~~~~~~~~~~                              |              |            |                         |                     |                 |                     |        |                       |
|                                | 4.5'                            |             | 94.0          | 89.3 – 92.2' SANDSTONE: Very pale brown (10 YR 8/2) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding to no discernible bedding due to bioturbation, horizontal hairline fractures, healed horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, severe bioturbation where   |      | · ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ |              | 0.0<br>ppm |                         |                     |                 |                     |        | 16.9%<br>Very<br>Poor |
| (94.5-<br>94.6)<br>VOCs<br>BET |                                 |             | -             | burrows are filled with clay and rimmed with iron precipitate, trace pits to vugs, pores and vugs have secondary mineralization of iron precipitate and calcite, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.   |      | V 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |              |            |                         |                     |                 |                     |        |                       |
| (95.5-<br>95.6)<br>VOCs<br>BET |                                 |             | - 95.0        | 92.2 – 92.4' SANDSTONE: Very pale brown (10 YR 8/2). Sand: 90%, fine grained, subangular to subrounded, Glauconite and iron precipitate: 10%, sandstone is well sorted, moderately hard, fine grained, very slight weathering displayed on outside of core as well as on horizontal open fractures, trace bioturbation where burrows are filled with clay and rimmed by iron precipitate, some fine grained glauconite throughout, rip up clasts of cemented parent sandstone is cemented in the glauconitic sandstone, secondary mineralization of  |      |   |              |            |                         |                     |                 |                     |        |                       |

| Sample  | _           |               |   | ·    |   |              |            |                         |                     | Soil Pr | operties            |       |                       |
|---|-------------|---------------|---|------|---|--------------|------------|-------------------------|---------------------|---------|---------------------|-------|-----------------------|
| Surface<br>Samples<br>Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log                             | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD/<br>Comments      |
|   |             | 96.0          | iron precipitate on horizontal fractures,<br>open horizontal fractures are rough and<br>irregular displaying in filling of very fine<br>sand and clay as well as iron precipitate.  |      | 7                                       | 100000       |            |                         |                     |         |                     |       |                       |
| 96.8-<br>96.9)<br>/OCs<br>BF                          |             | - 97.0        | 92.4 – 93.5' SANDSTONE: Very pale brown (10 YR 8/2) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding to no discernible bedding due to bioturbation, horizontal hairline fractures, healed horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, severe bioturbation where burrows are filled with clay and rimmed with iron precipitate, trace pits to vugs, pores and vugs have secondary mineralization of iron precipitate and calcite, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate. |      | 19/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |              |            |                         |                     |         |                     |       |                       |
| 97.9-<br>98)<br>/OCs<br>BF                            |             | - 98.0        | SANDSTONE: Very pale brown (10 YR 8/2) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding to no discernible bedding due to bioturbation, horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, severe bioturbation where burrows are filled with clay and rimmed with iron precipitate, trace pits to vugs, pores and vugs have secondary mineralization of iron precipitate and calcite, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  |      |   |              |            |                         |                     |         |                     |       |                       |
| 99.4-<br>99.5)<br>/OCs<br>BF                          |             | - 99.0        | 94.6 –95.6' GLAUCONITIC SANDSTONE: Pale olive (5Y 6/3). Sand 80%, very fine to fine grained, subangular to subrounded, Glauconite and clay: 20%, fine grained in size, sandstone is moderately well sorted, soft to moderately hard, fine grained, slight weathering of the core and fracture faces, thinly bedded to laminated cross beds, highly jointed, bioturbation with burrows filled by clay and rimmed with iron precipitate, some fine grained glauconite throughout as well as glauconite lenses and very thin glauconite beds, moderately well cemented, secondary mineralization of  |      |   |              | 0.0<br>ppm |                         |                     |         |                     |       | 23.3%<br>Very<br>Poor |

| Sam-   | nle T                        |             |                   | -  | 1    | _  |              |            | T                       |                     | Soil D          |                     | age 21 | 1 32             |
|--|------------------------------|-------------|-------------------|--|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                                   | Length Att. & Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log  | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| 100.3-<br>100.4)<br>VOCs<br>AF<br>100.6-<br>100.7)<br>VOCs<br>f3 |                              |             | - 101.0           | 95.6 – 96.3' SANDSTONE: Very pale brown (10 YR 8/2 to 10 YR 7/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay: 10%, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering on outside of core and on fracture faces, intensely jointed, horizontal hairline fractures, healed hairline fractures are filled with clay and iron precipitate, laminated horizontal and cross beds, little bioturbation where burrows are filled with clay and very fine sand, bands of oxidized limonites are singled through the content of the same through the content of the same through the sa |      | 7/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/12/<br>12/ |              |            |                         |                     |                 |                     |        |                  |
| 102.2-<br>02.3)<br>/OCs<br>AF                                    |                              |             | - 102.0           | grained glauconite grains throughout, secondary mineralization of iron precipitate, open horizontal and shallow angle fracture faces are irregular and soft and display in filling of clay and very fine sand as well as iron precipitate, little filled burrows at fracture faces.  96.3 – 97.5' SANDSTONE: Very pale brown (10 YR 8/2) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding to no discernible bedding due to bioturbation, horizontal hairline fractures, healed horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, severe bioturbation where  |      |  |              |            |                         |                     |                 |                     |        |                  |
| 102.8-<br>102.9)<br>/OCs<br>BET                                  | !                            |             | -<br>-<br>- 103.0 | burrows are filled with clay and very fine sand and rimmed with iron precipitate, secondary mineralization of iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.  97.5 – 97.9' GLAUCONITIC SANDSTONE: Pale  |      | 7/A/<br>2/A/<br>2/A/<br>2/A/<br>2/A/   |              |            |                         | 11.4%               |                 |                     |        |                  |
| 2  | 4.2'                         |             | 104.0             | olive (5Y 6/3). Sand: 80%, very fine to fine grained, subangular to subrounded, Glauconite and clay: 20%, fine grained in size, sandstone is moderately well sorted, moderately hard, fine grained, slight weathering of the core and fracture faces, thinly bedded to laminated cross beds, rip up clasts contain parent fine grained sand without glauconite, highly jointed, bioturbation with burrows filled by clay and rimmed with iron precipitate, some fine grained glauconite throughout as well as glauconite lenses and very thin glauconite beds, moderately well cemented, secondary mineralization of   |      | FEEL AND THE SECOND SEC   |              | 0.0<br>ppm |                         |                     |                 |                     |        | 15%<br>Very      |
|  |                              |             | -                 | iron precipitate, open horizontal fracture faces are irregular and soft and display in filling of clay and very fine sand as well as iron precipitate.  97.9 – 98.2' SANDSTONE: Very pale brown (10 YR   |      | < < > >  |              |            |                         |                     |                 | ×                   |        | Poor             |

|   |                                 |             |                               |  |      |                                       |              |     |                         |                     |                 |                     | ige 22 ( | of 52            |
|---|---------------------------------|-------------|-------------------------------|--|------|---------------------------------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|----------|------------------|
| San   |                                 |             |                               |  |      |                                       |              |     |                         |                     | Soil Pr         | operties            |          |                  |
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                 | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log                           | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200    | RQD/<br>Comments |
| (104.6-<br>104.7)<br>VOCS<br>BET<br>(106.2-<br>106.3)<br>VOCS<br>BET<br>(106.7-<br>106.8)<br>VOCS<br>BF |                                 |             | - 105.0<br>- 106.0<br>- 107.0 | horizontal to shallow in attitude, thinly bedded, trace very fine glauconite throughout, trace pores to pits throughout, trace bioturbation where burrows are filled with clay and very fine sand and rimmed by iron precipitate, secondary mineralization of iron on the outside of the core, moderately well cemented, horizontal healed hairline fractures are filled with iron precipitate, open horizontal and shallow angle fractures are irregular and rough and display in filling of clay and very fine sand.  NOTE: Wonewoc Ironton (Transition)   |      | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |              |     |                         |                     |                 |                     |          |                  |
| (107.3-<br>107.7)<br>PHYS<br>PROP<br>(107.7-<br>107.8)<br>VOCs<br>BET                                   |                                 |             | - 108.C                       | 99.0 – 99.7' SANDSTONE: Light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, sandstone is well sorted, moderately hard, fine grained, slight weathering on outside of core as well as on fracture faces, highly jointed, fractures are horizontal to shallow in attitude with trace vertical hairline fractures visible at fracture faces, thinly bedded, trace very fine glauconite throughout, trace pores to pits throughout, little bioturbation where burrows are filled with clay and very fine sand and rimmed by iron precipitate, secondary mineralization of iron on the outside of the core, moderately well cemented, horizontal healed hairline fractures are filled with iron precipitate, open horizontal and shallow angle fractures are irregular and rough and display in filling of clay and very fine sand as well as iron precipitation.  99.7 – 103.2' SANDSTONE: Very pale brown (10 YR 8/3 to 7/3). Sand: 90-95%, fine grained, subangular to subrounded, Glauconite |      |                                       |              |     |                         | 7.8%                |                 |                     |          |                  |

| ~                               | -, - 1                          |             |                  |  |      |             |              |            |                         |                     | g               |                     | ige 23 | 01 52                 |
|---------------------------------|---------------------------------|-------------|------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|-----------------------|
| Sam                             |                                 |             | <del>,,</del>    |  |      |             | ų.           |            |                         |                     | Soil Pr         | operties            |        |                       |
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet    | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD:<br>Comments      |
| 109.8-<br>109.9)<br>VOCs<br>BET | 4.1'                            |             | - 109.0<br>110.0 | in size throughout, sandstone is very well sorted, soft to moderately hard, fine grained, slight weathering on outside of core as well as open fracture faces, laminated horizontal and cross beds, highly to intensely jointed with fractures occurring at bedding planes, trace pores throughout, moderately well cemented, secondary mineralization of iron precipitate on the fracture faces as well as the outside of the core, contains bands of laminated iron oxidized/stained beds, trace horizontal hairline fractures healed hairline fractures are filled with iron precipitate and clay, open fractures are horizontal to shallow in attitude and have faces that are smooth to irregular and soft which display infilling of clay and very fine sand as well as iron precipitate.  104.0 – 104.3'  SANDSTONE: Yellow (10 YR 7/6) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, |      |             |              | 1.7<br>ppm |                         |                     |                 |                     |        | 15.8%<br>Very<br>Poor |
| (111-<br>111.1)<br>VOCs<br>BET  |                                 | 2           | - 111.0          | subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, moderately hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, intensely jointed, laminated bedding to no discernible bedding due to bioturbation, trace pores to pits throughout, horizontal hairline fractures, healed horizontal hairline fractures are filled with iron precipitate, trace laminated clay beds, bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, secondary mineralization of iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.   |      |             |              |            |                         |                     |                 |                     |        |                       |
| 111.9-<br>112)<br>VOCs<br>BET   |                                 |             | - 112.0<br>-     | 104.3 – 104.6' SANDSTONE: Yellowish brown (10 YR 5/6) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to fine grained, subangular to subrounded, Clay and Iron precipitate: 10%, well sorted, hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly jointed, laminated bedding, laminated beds of intense iron cementation and precipitation, little pores to pits throughout, horizontal to moderately dipping hairline fractures, healed hairline fractures are filled with iron precipitate, secondary mineralization of iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate.   |      |             |              |            |                         |                     |                 |                     |        |                       |
|                                 |                                 |             | - 113.0<br>-     | 104.6 – 106.4' SANDSTONE: Very pale yellow (10 YR 7/4). Sand: 95%, fine grained, subangular to subrounded, Glauconite and Iron precipitate: 5%, fine grained in size throughout, sandstone is very well sorted, soft to moderately hard, fine  |      |             |              |            |                         |                     |                 |                     |        |                       |

|  | 1.                              |             | <del></del>        | ,   |      |  |              |            |                         |                     | 0.41.5          |                     | age 24 | or 52            |
|--|---------------------------------|-------------|--------------------|---|------|--|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Sam  |                                 |             |                    | •   |      |  | <br>         |            |                         |                     | Soil Pr         | operties            | i<br>  | -                |
| Fracture<br>Surface<br>Samples                                     | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | NSCS | Graphic Log                              | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| 114.6-<br>114.7)<br>VOCs<br>AF                                     | 4.9'                            |             | -<br>-<br>114.0    | grained, slight weathering on outside of core as well as open fracture faces, laminated horizontal and cross beds, highly jointed to intensely jointed and fractured from 105.8 – 106.4' with fractures occurring at bedding planes, little pits to pores throughout, trace bioturbation where burrows are filled with clay and rimmed with iron precipitate, moderately well cemented, secondary mineralization of iron precipitate on the fracture faces as well as the outside of the core, contains bands of laminated iron oxidized/stained beds, trace horizontal hairline fractures, healed hairline fractures are filled with iron precipitate and clay, open fractures are horizontal to shallow in attitude and have faces that are smooth to irregular and soft which display infilling of clay and very fine sand as well as iron precipitate and little glauconite.  NOTE: Wonewoc Ironton member            |      |  |              | 0.0<br>ppm |                         |                     |                 | 6.                  |        | 65%<br>Fair      |
| (115.4-<br>115.5)<br>VOCs<br>BF                                    |                                 |             | - 115.0<br>-       | begins at ~106.4' bgs.  106.4 - 130.3' Elk Mound Group Wonewoc Formation: Ironton Member  SANDSTONE: fine to medium grained, subround grains, soft to moderately hard, poorly to well cemented, semi-friable, highly to intensely jointed, joints are horizontal, planar to cross bedding, laminated beds, trace iron staining, trace glauconite, moderate energy nearshore environment.  |      |  |              |            |                         |                     |                 |                     |        |                  |
| (116.4-<br>116.5)<br>VOCs<br>BF<br>(116.7-<br>116.8)<br>VOCs<br>f4 |                                 |             | - 116.0<br>- 117.0 | 106.4 – 107.3' SANDSTONE: Yellowish brown (10 YR 5/6) to light yellowish brown (10 YR 6/4). Sand: 90%, very fine to medium grained, predominately fine grained, subangular to subrounded, Glauconite and Iron precipitate: 10%, fine grained in size, sandstone is moderate to poorly sorted, well cemented with quartz and iron precipitate, hard, fine grained, slight weathering on the outside of core as well as on the fracture faces, highly to intensely jointed, thinly bedded, laminated beds of intense iron cementation and precipitation, little pores to pits throughout, horizontal to moderately dipping hairline fractures, trace vertical hairline fractures, healed hairline fractures are filled with iron precipitate, secondary mineralization of iron precipitate, open horizontal fractures are rough and irregular displaying in filling of very fine sand and clay as well as iron precipitate. |      | 4/14/14/14/14/14/14/14/14/14/14/14/14/14 |              |            |                         |                     |                 |                     |        |                  |
|  |                                 |             | -                  | 107.3 – 107.8' PHYSICAL PROPERTIES SAMPLE  107.8 – 108.1' SANDSTONE: Pale Red (2.5 YR 6/2) to Reddish brown (2.5 YR 5/3). Sand: 90-95%, fine to medium grained,   |      |  |              |            |                         |                     |                 |                     |        |                  |

| Sam                             | ple                          |             | Τ             |  | T .  | T           | -            |            |                         |                     | Soil Pr | operties            | ,     |                  |
|---------------------------------|------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|---------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples  | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content |         | Placticity<br>Index | P 200 | RQD;<br>Comments |
| (117.8-<br>117.9)<br>VOCs<br>BF |                              |             | - 118.0<br>-  | cement, hard, fine grained, fresh, highly jointed, laminated to thinly bedded, little pores through vugs throughout, pits and vugs filled with very fine glauconitic sand and clay, bands of pale red and purplish discoloration, healed horizontal hairline fractures are filled with glauconite and very fine sand, secondary mineralization of iron precipitate on open fracture faces, open horizontal fractures are smooth to rough and display infilling of very fine sand and clay as well as iron precipitate.   |      |             |              |            |                         |                     |         |                     |       |                  |
|                                 | 5.0'                         |             | - 119.0       | SANDSTONE: Very pale brown (10 YR 8/2). Sand: 95%, very fine to fine grained, predominately fine grained, subangular to subrounded, Clay: 5%, sandstone is very well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, laminated horizontal and cross bedding, intensely jointed, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth displaying infilling of clay and very fine sand.                     |      |             |              | 5.4<br>ppm |                         |                     |         |                     |       | 96.7%<br>Excelle |
| (120.4-<br>120.5)<br>VOCs<br>AF |                              |             | -             | 109.0 – 113.1' SANDSTONE: Light gray (10 YR 7/2). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, laminated and cross bedded, intensely jointed, semi- friable in strata that display a greater degree of jointing, trace pores and pits throughout, well cemented with quartz and clay, trace iron oxidation on fracture faces, open fractures occur at bedding planes and are horizontal and smooth displaying infilling of clay and very fine |      |             |              |            |                         | 11.3%               |         |                     |       |                  |
| (121.5-<br>121.6)<br>VOCs<br>BF |                              |             | -             | 114.0 – 118.9'  SANDSTONE: Light gray (10 YR 7/2).  Sand: 95%, fine to medium grained, predominately fine grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and display cross bedding (~100), cross beds display coarsening upward grading, highly jointed, semi-friable in strata that display  |      |             |              |            |                         |                     |         |                     |       |                  |
| (122-<br>122.1)                 |                              |             | - 122.0       | a greater degree of fracturing, trace pores and pits throughout, trace bioturbation where burrows are filled with  |      | 15          |              |            |                         |                     |         |                     |       |                  |

| Sam  | nle                          |             |                              |  |      |             |              |            |                         |                     | Soil D-         | operties         | ige 26 | 01 32            |
|--|------------------------------|-------------|------------------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                             | Length Att. & Recovered (in) | Blow Counts | Depth in Feet                | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity Index | P 200  | RQD/<br>Comments |
| 122.8-<br>122.9)<br>VOCs<br>f4                             |                              |             | - 123.0                      | very fine sand and clay, well cemented with quartz and clay, trace iron oxidation on fracture faces, sandstone displays bands of oxidized iron staining that follow bedding planes from 119.5 – 119.9', healed horizontal hairline fractures that are filled with clay and very fine sand, open horizontal and low angle fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand.  119.0 – 124.0' SANDSTONE: Light gray (10 YR 7/1). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and display cross bedding (~200), highly jointed, trace pores and pits throughout, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace iron exidetion on |      |             |              |            |                         |                     |                 |                  |        |                  |
| 124.4-<br>24.45)<br>VOCs<br>BF<br>125.2-<br>125.8)<br>PHYS | 5.0'                         |             | - 124.0<br>-<br>-<br>- 125.0 | bedding planes, trace iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand.  124.0 – 125.2' SANDSTONE: Light gray (10 YR 7/1). Sand: 95%, fine to medium grained, predominately medium grained, subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and display shallow angle cross bedding, highly jointed, trace pores and pits throughout, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, trace  |      |             |              | 5.1<br>ppm |                         | 7.0%                |                 |                  |        | 96.7%<br>Excelle |
| 125.8-<br>25.9)<br>/OCs<br>BF                              |                              |             | -<br>- 126.0                 | laminated to very thin beds of sandstone cemented with pale green clay, sandstone displays bands of oxidized iron staining that follow bedding planes, little iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semirough displaying infilling of clay and very fine sand.  125.2 – 125.8   |      |             |              |            |                         |                     |                 |                  |        |                  |
| 126.3-<br>126.4)<br>VOCs<br>f4                             |                              |             | -                            | PHYSICAL PROPERTIES SAMPLE  125.8 – 129.0° SANDSTONE: Light gray (10 YR 7/1). Sand: 95%, fine to medium grained, predominately medium grained,   |      |             |              |            |                         |                     |                 |                  |        |                  |

| g                              | -1c T                                  |             |                    |  | Ι    |                    | Γ            |            |                         |          | oil na | operties         | ige 27 | T              |
|--------------------------------|--|-------------|--------------------|--|------|--------------------|--------------|------------|-------------------------|----------|--------|------------------|--------|----------------|
| Fracture<br>Surface<br>Samples | Length Att. & Figure 19 Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | nscs | Graphic Log        | Well Diagram | FID        | Compressive<br>Strength | re<br>it | Liquid | Placticity Index | P 200  | RQD.' Comments |
| 127.4-<br>127.5)<br>VOCs<br>BF |  |             | - 127.0<br>- 128.0 | subrounded to rounded, Clay: 5%, sandstone is moderately well sorted, moderately hard to hard, fine grained, very slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated and display shallow angle cross bedding, highly jointed, trace pores and pits throughout, trace bioturbation where burrows are filled with very fine sand and clay, well cemented with quartz and clay, trace laminated to very thin beds of sandstone cemented with pale green clay, sandstone displays bands of oxidized iron staining that follow bedding planes, little iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semirough displaying infilling of clay and very fine sand.   |      | 7/2/2/2/2/2/2/2/2/ |              |            |                         |          |        |                  |        |                |
| 128.1)<br>VOCs<br>f6           |  |             | -                  |  |      |                    |              |            |                         |          |        |                  |        |                |
| (130-<br>130.1)<br>VOCs<br>BF  | 4.7'                                   |             | - 129.0<br>- 130.0 | 130.3 - 231.7' Elk Mound Group Wonewoc Formation: Galesville Member SANDSTONE: Medium grained, subround grains, soft to hard, poorly to well cemented, highly jointed, joints are horizontal, planar to cross bedding, laminated to very thin beds, friable near fracture faces, little clay to silt in beds, little to some iron staining at bedding planes, trace bioturbation, trace glauconite, trace pores to pits, secondary mineralization, moderate to high energy nearshore environment.  129.0 – 131.8' SANDSTONE: Light gray (10 YR 7/2). Sand: 90%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay: 10%, sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, moderate weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, friable riear fractures, moderately well cemented with quartz and clay, |      |                    |              | 2.7<br>ppm |                         |          |        |                  |        | 76.7%<br>Good  |

| Sam                              | ple                             |             | Γ             |   |      |             |              | _          | Ī                       |                     | Soil Pr         | operties            | age 28 |                  |
|----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (131.1-<br>131.2)<br>VOCs<br>BET |                                 |             | - 131.0       | sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and very fine sand as well as iron precipitate.  NOTE: Wonewoc Galesville member begins at ~130.3' bgs.   |      |             |              |            |                         |                     |                 |                     |        |                  |
| (131.8-<br>131.9)<br>VOCs<br>BF  |                                 |             | - 132.0<br>-  | 131.8 – 133.0' SANDSTONE: Light gray (10 YR 7/2). Sand: 100%, very fine to medium grained, predominately fine grained, subrounded to rounded, sandstone is very well sorted, very hard, fine grained, very slight weathering on outside of core   |      |             |              |            |                         |                     |                 |                     |        |                  |
| 132.3-<br>132.4)<br>VOCs<br>f6   |                                 |             |               | as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, very well cemented with quartz, sandstone displays bands of oxidized iron staining that follow bedding planes, trace  |      |             |              |            |                         |                     |                 |                     |        |                  |
|                                  |                                 |             | -<br>- 133.0  | horizontal laminated partings of pale<br>green shale, trace bioturbation where<br>burrows are filled with oxidized clay, little<br>to some iron oxidation on fracture faces,<br>based boxizontal halding fractures that   |      |             |              |            |                         |                     |                 |                     |        |                  |
|                                  |                                 | 22          | - 134.0       | 133.0 – 133.7' SANDSTONE: Light gray (10 YR 7/2) to yellow (10 YR 7/6). Sand: 90%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay: 10%, sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, moderate weathering on outside of core as well as on the fracture faces, beds are  |      |             |              |            |                         |                     |                 |                     |        |                  |
|                                  | 4.7'                            |             | 104.0         | bedded and also display shallow angle cross bedding, highly jointed, friable near fractures, moderately well cemented with quartz and clay, sandstone displays bands of oxidized iron staining that follow bedding planes, trace horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand, open fractures occur at bedding planes and are horizontal and smooth to semi-rough displaying infilling of clay and |      |             |              | 2.1<br>ppm |                         |                     |                 |                     |        | 93.3%<br>Excelle |
| (135-<br>135.1)<br>VOCs<br>BF    |                                 |             | — 135.0<br>-  | very fine sand as well as iron precipitate. \\ 134.0 - 138.8' \\ SANDSTONE: Light gray (10 YR 7/1) to \\ yellow (10 YR 7/6). Sand: 90%, very fine to medium grained, predominately fine \\ grained, subrounded to rounded, Clay \\ and iron precipitate: 10%, sandstone is  |      |             |              |            |                         |                     |                 |                     |        |                  |

| Sam                            |                                 |             |               |   |      |             |              | -          |  |                     | Soil Pr         | operties            | ige 29 |                  |
|--------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|------------|--|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength  | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (135.9-<br>136)<br>VOCs<br>BET |                                 |             | - 136.0       | moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, friable near fracture faces, moderately well cemented with quartz and clay, trace bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace pores to vugs, pits and vugs are filled with very fine sand and oxidized clay, little horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine |      |             |              |            | - Apply  |                     |                 |                     |        |                  |
| (136.9-<br>137)<br>VOCs<br>BF  |                                 |             | - 137.0<br>-  | sand, open fractures occur at bedding planes and are horizontal to shallow and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate.   |      |             |              |            |  |                     |                 |                     |        |                  |
| (137,9-<br>138)<br>VOCs<br>AF  |                                 |             | -<br>- 138.0  | VI<br>19  |      |             |              |            | And the state of t |                     |                 |                     |        |                  |
|                                | 5.0'                            |             | 139.0         | SANDSTONE: Light gray (10 YR 7/1) to yellow (10 YR 7/6). Sand: 90-95%, very fine to medium grained, predominately medium grained, subrounded to rounded, Clay and iron precipitate: 5-10%,  |      |             |              | 1.3<br>ppm |  | 3                   |                 |                     |        | 71.7%<br>Fair    |
|                                |                                 |             | -             | sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to  |      |             |              |            |  |                     |                 |                     |        |                  |

|                                 | 16                              |             |               | <del></del>  |      |             | Π            |            | T                       |                      | G_H B           |                     | age 30 | UI JZ  |
|---------------------------------|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|----------------------|-----------------|---------------------|--------|--|
| Sam                             |                                 | , A         |               |  |      |             | _            |            |                         |                      | Soil Pr         | operties            |        | -  |
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | -Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD. Comments  |
| (139.8-<br>140)<br>VOCs<br>AF   |                                 |             | - 140.0<br>-  | very thinly bedded and also display shallow angle cross bedding, highly jointed, friable near fracture faces, moderately well cemented with quartz and clay, little bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace pores to vugs, pits and vugs are filled with very fine sand and oxidized clay, little horizontal laminated partings of |      |             |              |            | -                       |                      | 9               |                     |        | ,  |
| (140.8-<br>140.9)<br>VOCs<br>BF |                                 |             | -<br>- 141.0  | pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to shallow and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate.  |      |             |              |            |                         |                      | ,               |                     |        | 7.7  |
| (141.5-<br>141.6)<br>VOCs<br>f8 |                                 |             | -             |  |      |             |              |            |                         | 10.3%                |                 |                     |        |  |
| (142-<br>142.1)<br>VOCs<br>f13  |                                 |             | - 142.0<br>-  | -  |      |             |              |            |                         |                      |                 |                     |        |  |
|                                 |                                 |             | - 143.0<br>-  |  |      |             |              |            |                         |                      |                 |                     |        | - Control of the Cont |
|                                 | 4.9                             |             | -<br>- 144.0  | 144.0 - 146.1'<br>SANDSTONE: Light gray (10 YR 7/1) to   |      |             |              | 4.2<br>ppm |                         | j                    |                 | , 60                |        | 85%<br>Good  |

| Sam  | ple                             |             |               |   |      |             |              |     |                         |                     | Soil Pr | operties            |       |               |
|--|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|---------|---------------------|-------|---------------|
| Fracture<br>Surface<br>Samples                   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200 | RQD. Comments |
| (145-<br>145.1)<br>VOCs<br>BF<br>(146-<br>146.1) |                                 |             | - 145.0<br>-  | yellow (10 YR 7/6). Sand: 90-95%, very fine to medium grained, predominately medium grained, subrounded to rounded, Clay and iron precipitate: 5-10%, sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly jointed, friable near fracture faces, moderately well cemented with quartz and clay, little bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace pores to vugs, pits and vugs are filled with very fine sand and oxidized clay, little horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to shallow and are irregular to smooth displaying infilling of clay and very fine |      |             |              |     |                         |                     |         |                     |       |               |
| VOCs<br>BF<br>(146-<br>146.6)<br>PHYS<br>PROP    |                                 |             | — 146.0°      | landaria Januaria da Landaria de la la la la la la la la la la la la la   |      | ***         |              |     |                         | 9.4%                |         |                     |       |               |
| (147.1-<br>147.2)<br>VOCs<br>BF                  |                                 |             | - 147.0       | 146.7 – 149.0' SANDSTONE: White (10 YR 8/1) to yellow (10 YR 7/6). Sand: 90-95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5-10%, sandstone is moderately sorted, soft to moderately hard, mostly moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly   |      |             |              |     |                         |                     |         |                     |       |               |
| (148.2-<br>148.3)<br>VOCs<br>AF                  | 13                              |             | -<br>- 148.0  | jointed, friable near fracture faces, moderately well cemented with quartz and clay, little bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace porce to wurs pits and wurs are   |      |             |              |     |                         |                     | 2       |                     |       |               |

| Sam                             |                                 |             |                    |  |      |             |              |         |                         |                     | Soil Pr         | operties            | ,     |                  |
|---------------------------------|---------------------------------|-------------|--------------------|--|------|-------------|--------------|---------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID     | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| =                               | د چارال داده                    |             | -                  | shallow and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate.   |      |             |              |         |                         |                     |                 |                     |       |                  |
| (150.1-<br>150.2)<br>VOCs<br>AF | 5.0'                            |             | - 150.0<br>- 151.0 | 149.0 – 154.0' SANDSTONE: White (10 YR 8/1) to yellow (10 YR 7/6). Sand: 90-95%, very fine to medium grained, predominately medium grained, subrounded to rounded, Clay and iron precipitate: 5-10%, sandstone is moderately sorted, moderately hard to soft, mostly moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, highly to moderately jointed, friable near fracture faces, moderately well cemented with quartz and clay, very well cemented with quartz cement from 149.6 – 150.2', little bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace pores to vugs, pits and vugs are filled with very fine sand and oxidized clay, little horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to moderately dipping in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as iron precipitate. |      |             |              | 1.3 ppm |                         |                     |                 |                     |       | 58.3%<br>Fair    |
| (151.5-<br>151.6)<br>VOCs<br>BF |                                 |             | - 152.0            |  |      |             |              |         |                         |                     | -               |                     |       |                  |
| (152.5-<br>152.6)<br>VOCs<br>BF |                                 |             | - 152.0<br>-<br>-  |  |      |             |              |         |                         |                     | -               |                     |       |                  |

| Sample   |             |                               |  |      |             |              |            |                         |                     | Soil Pr         | operties            |       |                  |
|--|-------------|-------------------------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture Surface Samples Length Att. & Recovered (in)          | Blow Counts | Depth in Feet                 | Soil/Rock Description And Geologic Origin For Each Major Unit  | nscs | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| 153.3-<br>153.4)<br>VOCs<br>BET                                |             | - 153.0<br>-                  |  |      |             |              |            |                         |                     |                 |                     |       |                  |
| (155-<br>155.1)<br>VOCs<br>BF<br>(155.9-<br>156)<br>VOCs<br>BF |             | - 155.0<br>- 156.0<br>- 157.0 | bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace pores to vugs, pits and vugs are filled with very fine sand and oxidized clay, little horizontal laminated partings of pale green shale, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to shallow in attitude and are irregular to smooth displaying infilling |      |             |              | 2.9<br>ppm |                         |                     |                 |                     |       | 33.3%<br>Poor    |

| S                                       | Sampl         | le                              |             |                              | <u></u>   |      | Ţ <del>-</del> |              |     | 1                       |                     | Soil Pr |                     | ige 34 |                  |
|---|---------------|---------------------------------|-------------|------------------------------|---|------|----------------|--------------|-----|-------------------------|---------------------|---------|---------------------|--------|------------------|
| Fracture<br>Surface                     | -             | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log    | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (158<br>158.<br>VOC<br>BET              | 1)<br>Ss      |                                 |             | -<br>-<br>-<br>158.0         |   |      |                |              |     |                         |                     |         |                     |        |                  |
| (159)<br>160<br>VOC<br>BF               | .9-<br>.)<br> | 4.3'                            |             | - 159.0<br>-<br>-<br>- 160.0 | 159.0 – 161.9' SANDSTONE: White (10 YR 8/1) to yellow (10 YR 7/6). Sand: 90%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 10%, sandstone is moderately sorted, moderately hard to soft, mostly moderately hard, fine grained, slight to moderate weathering on outside of core as well as on the fracture faces, beds are horizontally laminated to very thinly bedded and also display shallow angle cross bedding, intensely jointed, friable near fracture faces, moderately well cemented with quartz and clay, little bioturbation where burrows are filled with clay and very fine sand and rimmed with iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, some horizontal laminated partings of pale green shale, shale partings increase with depth, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to shallow in attitude and are irregular to |      |                |              | NM  |                         | 13.8%               |         |                     |        | 31.7%<br>Poor    |
| (16 <sup>4</sup> )<br>161.<br>VOC<br>BF | 1)  <br>Ss    |                                 |             | 161.0                        | smooth displaying infilling of clay and very fine sand as well as secondary   |      |                |              |     |                         |                     |         |                     |        |                  |

| Sam                              |                                 |             |               |   |      |  |              |     |                         |                     | Soil Pr         | operties            |       |                |
|----------------------------------|---------------------------------|-------------|---------------|---|------|--|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|----------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log  | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD.' Comments |
| (161.8-<br>161.9)<br>VOCs<br>BET |                                 |             | 162.0         | bedding planes, little horizontal laminated partings of pale green shale, little iron oxidation on fracture faces, healed horizontal hairline fractures that  |      |  |              |     |                         |                     |                 |                     |       |                |
| 162.8-                           |                                 |             | -             | are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal to shallow in attitude and are irregular to smooth displaying infilling of clay and very fine sand as well as secondary mineralization of iron precipitate.  |      |  |              |     |                         |                     |                 |                     |       |                |
| 162.9)<br>VOCs<br>BF             |                                 |             | - 163.0<br>-  | Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to soft, predominately moderately hard, fine grained, moderate weathering, friable in strata that display greater percentages of fractures, trace bioturbation where burrows are filled with very fine sand and iron precipitate, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, intensely jointed, moderately |      | المارير/مارير/مير/مير/مير/مير/مير/مير/مير/مير/مير/ |              |     |                         |                     |                 |                     |       |                |
|                                  | 4.7'                            | ,           | - 164.0<br>-  | well cemented with iron precipitate and quartz, sandstone is heavily oxidized with iron staining, healed hairline fractures are filled with iron precipitate, fractures are horizontal to shallow in attitude and are irregular and smooth displaying infilling of clay and fine to medium sand as well as secondary mineralization of liron precipitate.   |      |  |              | NM  |                         |                     |                 |                     |       | 81.7%<br>Good  |
| 164.6-<br>164.7)<br>VOCs<br>AF   |                                 |             | -<br>- 165.0  | 164.0 – 165.6'  SANDSTONE: Yellowish brown (10 YR 5/8) to dark yellowish brown (10 YR 4/6). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to soft, predominately moderately hard, fine grained, moderate weathering, friable in strata that display greater percentages of fractures, trace   |      | 12/12/12/12/12                                     |              |     |                         |                     |                 |                     |       |                |
| 165.4-<br>165.5)<br>VOCs<br>BF   |                                 |             | - 166.0       | bioturbation where burrows are filled with very fine sand and iron precipitate, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly to intensely jointed, moderately well cemented with iron precipitate and quartz, sandstone is heavily oxidized with iron staining, little pores to vugs throughout, pits and vugs are filled with oxidized clay and very fine sand, healed hairline fractures are filled with iron precipitate, fractures are  |      |  |              |     |                         |                     |                 |                     |       |                |

| Sam  | ple                             |             |               |  |      | Γ                 |              |     |                         |                     | Soil Pr         | operties            | ige 36 ( |                   |
|--|---------------------------------|-------------|---------------|--|------|-------------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|----------|-------------------|
| Fracture<br>Surface<br>Samples                                     | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log       | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200    | RQD'.<br>Comments |
| 166.2-<br>166.3)<br>VOCs<br>BF<br>166.2-<br>166.7)<br>PHYS<br>PROP |                                 |             |               | clay and fine to medium sand as well as secondary mineralization of iron precipitate.  165.6 – 166.2' SANDSTONE: Very pale brown (10 YR 8/3) to yellow (10 YR 7/6). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is well sorted, moderately   |      |                   |              |     |                         | 12.2%               |                 |                     |          |                   |
| 167.6-   |                                 |             | — 167.0       | hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated, highly jointed, well cemented with quartz, sandstone displays bands of oxidized iron staining that follow bedding planes, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal and irregular to smooth displaying infilling of clay and very fine sand as well as heavy secondary mineralization of iron precipitate. |      | 1/27/             |              |     |                         | 27                  |                 |                     |          |                   |
| VOCs<br>BF   |                                 |             | - 168.0       | 166.2 – 166.8' PHYSICAL PROPERTIES SAMPLE  166.8 – 167.4' SANDSTONE: Very pale brown (10 YR 8/3) to yellow (10 YR 7/6). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and iron precipitate: 5%, sandstone is well sorted, moderately hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated,   |      | 2/12/12/12/12/12/ |              |     |                         |                     |                 |                     | .1       |                   |
|  | 4.8'                            |             | 169.0         | highly jointed, moderately well cemented with quartz, sandstone displays bands of oxidized iron staining that follow bedding planes, trace to little bioturbation where burrows are filled with oxidized clay, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at bedding planes and are horizontal and irregular to smooth displaying infilling of clay and very fine sand as well as heavy secondary mineralization of iron precipitate.  |      | 15/15/15/15/15    |              | NM  |                         |                     |                 |                     |          | 83.3%<br>Good     |
| (170.1-<br>170.2)<br>VOCs<br>f7                                    |                                 |             | - 170.0       | 167.4 – 168.8' SANDSTONE: Yellowish brown (10 YR 5/8) to dark yellowish brown (10 YR 4/6). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to soft, predominately moderately hard, fine grained, moderate weathering, trace bioturbation where burrows are filled with very fine sand and iron precipitate, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly to intensely jointed, moderately well cemented with iron          |      |                   |              |     | 88                      |                     |                 |                     |          |                   |

|  |                                 |             |                    |   |      |             |              |     |                         |                     |                 |                     | age 37 | of 52            |
|--|---------------------------------|-------------|--------------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Sam  |                                 |             | ٠                  |   |      |             | _            |     | 1                       |                     | Soil Pr         | operties            | 3<br>I |                  |
| Fracture<br>Surface<br>Samples                                   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (171.4-<br>171.5)<br>VOCs<br>BF<br>(171.9-<br>172)<br>VOCs<br>BF |                                 |             | - 172.0            | are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly jointed, moderately well cemented with iron precipitate and quartz, sandstone is heavily oxidized with iron staining, bands of heavier iron staining and cementation increase with depth, little pores to pits throughout, hairline fractures are filled with iron precipitate, fractures are horizontal to shallow in attitude and are irregular and smooth displaying infilling of clay and fine to medium sand as well as secondary mineralization of iron precipitate.  |      |             |              |     |                         |                     |                 |                     |        |                  |
| (173-<br>173.1)<br>VOCs<br>AF                                    | 5.1'                            |             | - 173.0<br>- 174.0 | 174.0 – 174.8' SANDSTONE: Yellowish brown (10 YR 5/8) to dark yellowish brown (10 YR 4/6). Sand: 90%, very fine to medium grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 10%, sandstone is moderately well sorted, moderately hard to soft, predominately moderately hard, fine grained, moderate weathering, trace bioturbation where burrows are filled with very fine sand and iron precipitate, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly jointed, moderately well |      |             |              | NM  |                         |                     |                 |                     |        | 68.3%<br>Fair    |
| VOCs<br>BF   |                                 |             |                    | 174.8 – 177.6   |      |             |              |     |                         |                     |                 |                     |        |                  |

| Sample                           |                | _           |                    |   |      |             |              |     |                         |                     | Soil Dr         | Pa<br>operties   | ige 38 | of 52            |
|----------------------------------|----------------|-------------|--------------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|------------------|--------|------------------|
|                                  | Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity Index | P 200  | RQD/<br>Comments |
| (175.5-<br>175.6)<br>VOCs<br>BF  |                |             | - 175.0<br>- 176.0 | grained, predominately medium grained, subrounded to rounded, clay and iron precipitate: 5%, sandstone is moderately well sorted, moderately hard to soft, predominately moderately hard to soft, predominately moderately hard, fine grained, moderate weathering, trace bioturbation where burrows are filled with very fine sand and iron precipitate, beds are horizontally laminated to very thinly bedded and also display low angle cross bedding, highly jointed, moderately well to poorly cemented with iron precipitate and quartz, sandstone is heavily oxidized and exhibits limonite and iron staining, sandstone has bands of heavier iron | 24   |             |              |     |                         |                     |                 |                  |        |                  |
| (176.9-<br>177)<br>VOCs<br>BF    |                |             | - 177.0<br>-       |   |      |             |              |     |                         |                     |                 |                  |        |                  |
| (178.3-<br>178.4)<br>VOCs<br>BET |                |             | - 178.0<br>- 179.0 | hard, fine grained, slight weathering on outside of core as well as on the fracture faces, beds are horizontally laminated as well as cross bedded, highly to intensely jointed, moderately well cemented with quartz and iron precipitate, sandstone displays bands of oxidized iron staining that follow bedding planes, trace to little bioturbation where burrows are filled with oxidized clay, little to some iron oxidation on fracture faces, healed horizontal hairline fractures that are filled with clay and very fine sand as well as iron precipitate, open fractures occur at heading planes and are horizontal and                        |      |             |              |     |                         |                     |                 |                  |        |                  |

|   |                                 | 1           |  |   |      |             |              |             |                         |                     |                 |                     | ige 39 | 01 32              |
|---|---------------------------------|-------------|--|---|------|-------------|--------------|-------------|-------------------------|---------------------|-----------------|---------------------|--------|--------------------|
| Sam   |                                 |             |  |   | ,    |             |              |             |                         |                     | Soil Pro        | perties             |        | -                  |
| Fracture<br>Surface<br>Samples                          | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                                | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments   |
| 180.5-<br>180.6)<br>VOCs<br>BET<br>181.2-<br>VOCs<br>AF | 1.6'                            |             | - 180.00<br>- 181.00<br>- 182.00<br>- 183.00 | 180.0 – 181.6' SANDSTONE: Brownish yellow (10 YR 6/8) to yellowish brown (10 YR 5/8). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is moderately sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, laminated to very thin horizontal and cross beds, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              | 1.93<br>ppm |                         |                     |                 |                     |        | 0%<br>Very<br>Poor |

| Sam  |                                 |             |                   | <u>·.</u>   |      |             |              |            |                         |                     | Soil Pr         | operties            | ige 40 |                  |
|--|---------------------------------|-------------|-------------------|---|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                       | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet     | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
|  |                                 |             |                   |   | s    |             |              |            |                         |                     |                 |                     |        |                  |
| 184.9-<br>185)<br>VOCs<br>AF                         | 4.8'                            |             | - 185.0<br>-      | 184.0 – 187.4' SANDSTONE: Brownish yellow (10 YR 6/8) to yellowish brown (10 YR 5/8). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is moderately sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, laminated to very thin horizontal and cross beds, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures are filled with iron precipitate, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              | 2.2<br>ppm |                         |                     |                 |                     |        | 38.3%<br>Poor    |
| 186.3-<br>186.4)<br>/OCs<br>AF .                     |                                 |             | - 186.0           |   |      |             |              |            |                         |                     |                 |                     |        |                  |
| 187.2-<br>187.3)<br>187.3-<br>187.9)<br>PHYS<br>PROP |                                 |             | - 187.0<br>-      | 187.4 – 188.1'<br>PHYSICAL PROPERTIES SAMPLE  |      |             |              |            |                         | 13.6%               |                 |                     |        |                  |
| 187.9-<br>188)<br>VOCs                               |                                 |             | -<br>-<br>- 188.0 | 188.1' – 188.9' SANDSTONE: Brownish yellow (10 YR 6/8) to yellowish brown (10 YR 5/8). Sand: 95%, very fine to medium grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is moderately sorted, moderate to poorly cemented with quartz  |      |             |              |            |                         |                     |                 |                     |        |                  |

| Sam   | ple                             |             |                    |  |      |             |              |      |                         |                     | Soil Pr         | operties            | ige 41 |                  |
|---|---------------------------------|-------------|--------------------|--|------|-------------|--------------|------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                              | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID  | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| BF  | 4.1'                            |             | 189.0              | and iron precipitate cement, soft and friable, fine grained, moderate weathering on the outside of the core as well as on the fracture faces, laminated to very thin horizontal and cross beds, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures are filled with iron precipitate, fractures range from tight to open, predominately tight,                                  |      |             |              | 3.27 |                         |                     |                 |                     |        | 13.3%            |
|   |                                 |             | -                  | fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  |      |             |              | ppm  | i                       |                     |                 |                     |        | Very<br>Poor     |
| (189.5-<br>189.6)<br>VOCS<br>BET<br>(190.9-<br>191)<br>VOCS |                                 |             | - 190.0<br>- 191.0 | well as on the fracture faces, laminated to very thin horizontal and cross beds, sandstone displays bands of oxidized iron staining that alternate and vary in degree of iron concentration and follow bedding planes, pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures are filled with iron precipitate, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              |      |                         |                     |                 |                     |        |                  |
| (191.7-191.8)<br>VOCs<br>AF                                 |                                 |             | - 192.0            | follow bedding planes, highly to intensely jointed, pores to pits throughout, trace  |      |             |              |      |                         |                     |                 |                     |        |                  |
| 192.2)<br>VOCs<br>BF  |                                 |             | -                  | pores and pits are filled with iron nodules<br>and have iron and limonite<br>staining/precipitation rimming the pits,<br>fractures occur at bedding planes and<br>are horizontal to shallow in attitude,<br>fractures range from tight to open,  |      |             |              |      |                         |                     |                 |                     |        |                  |

|   |                                 |             |               |  |      |             |              |            | 1                       |                     |                 |                     | ige 42 | 01 32            |
|---|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Sam   |                                 |             |               |  |      |             |              |            |                         |                     | Soil Pr         | operties            | -      |                  |
| Fracture<br>Surface<br>Samples                      | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | · Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
|   |                                 |             | -<br>- 193.0  | predominately open, vertical healed hairline fractures are visible on fracture faces and are filled with iron oxidized clay, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.   |      |             |              |            |                         |                     |                 |                     |        |                  |
|   | 4.9'                            |             | -<br>194.0    | 194.0 – 195.7'<br>SANDSTONE: Olive yellow (2.5 Y 6/6).<br>Sand: 95%, very fine to fine grained,  |      |             |              | 1.5<br>ppm |                         |                     |                 |                     |        | 48.3%<br>Poor    |
| 194.6-<br>194.7)<br>VOCs<br>AF<br>(195.4-<br>195.5) |                                 |             | - 195.0       | predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to thinly bedded and trace laminated cross beds, sandstone displays trace faint bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely   |      |             |              |            |                         |                     |                 |                     |        |                  |
| VOCs<br>BF<br>(196.3-<br>(196.4)                    |                                 |             | - 196.0       | iron precipitate and in filling of clay and very fine sand.  195.7 – 198.7' SANDSTONE: Pale yellow (2.5 Y 7/4) to yellow (2.5 Y 7/8). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally laminated to |      |             |              |            |                         |                     |                 |                     |        |                  |
| 196.4)<br>VOCs<br>AF<br>(196.8-196.9)               |                                 |             | •             | thinly bedded and trace laminated cross beds, sandstone displays trace faint bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits,   |      |             |              |            |                         |                     |                 |                     |        |                  |

| Sam                              |                                 |             |               |   |      |             |              |     |                         |                     | Soil Pr         | operties            | ge 43 | <u> </u>      |
|----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|---------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD. Comments |
| VOCs<br>f4                       |                                 |             | - 197.0       | fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and limonite and in filling of clay and very fine sand.   |      |             |              |     |                         |                     |                 | į                   |       |               |
| 197.9-<br>198)<br>VOCs<br>BET    | 21                              |             | -<br>- 198.0  |   |      |             |              |     |                         |                     |                 |                     |       |               |
|                                  | 5.0'                            |             | - 199.0       | 199.0 – 204.0'<br>SANDSTONE: Yellow (2.5 Y 7/8) to (2.5   |      |             |              | NM  |                         |                     |                 |                     |       | 78.3%<br>Good |
| (199.7-<br>199.8)<br>VOCs<br>AF  |                                 |             | - 200.0       | Y 7/6). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as well as on the fracture faces, horizontally thinly bedded and trace laminated cross beds, sandstone displays trace bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely |      |             |              |     |                         |                     |                 |                     |       |               |
| (200.6-<br>200.7)<br>VOCs<br>BET |                                 |             | - 201.0       | angle hairline fractures are filled with iron precipitate and follow bedding planes, open fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are smooth due to friability and display secondary mineralization of iron precipitate and limonite and in filling of clay and very fine sand.  |      |             | 7            |     |                         |                     |                 |                     |       |               |

| Sam  |                                 | _           |               |   |      |             |  |            |                         |                     | Soil Pr         | operties            | -<br>- |                  |
|--|---------------------------------|-------------|---------------|---|------|-------------|--|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                             | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | USCS | Graphic Log | Well Diagram   | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (201.6-<br>201.7)<br>VOCs<br>f6                            |                                 |             | - 202.0       |   | 5    |             | A LA KA A A KA Y Y X X X X X X X X X X X X X X X X X |            |                         |                     |                 |                     |        |                  |
| (203-<br>203.1)<br>VOCs<br>BF                              |                                 |             | - 203.0       | 204.0 – 204.9' SANDSTONE: Yellow (2.5 Y 7/8) to (2.5 Y 7/6). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight   |      |             | N X X X X X X X X X X Y Y Y Y X X X X X              |            |                         |                     |                 |                     |        |                  |
|  | 4.1'                            |             | -<br>- 204.0  | weathering on the outside of the core as well as on the fracture faces, horizontally thinly bedded and trace laminated cross beds, sandstone displays trace bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely jointed, predominately highly jointed, pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, healed horizontal and shallow angle hairline fractures are filled with iron precipitate and follow bedding planes, open fractures occur at bedding planes |      |             | **************************************               | 2.6<br>ppm |                         |                     |                 |                     |        | 30%<br>Poor      |
| 204.6-<br>204.7)<br>VOCs<br>BF<br>204.9-<br>205.4)<br>PHYS |                                 |             | - 205.0       | and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are irregular to smooth and soft due to friability and display secondary mineralization of iron precipitate and limonite and in filling of clay and very fine sand.  204.9 – 205.4' PHYSICAL PROPERTIES SAMPLE   | =    |             | X  |            |                         | 14.1%               |                 |                     |        |                  |
|  |                                 |             | -             | 205.4 – 208.3' SANDSTONE: Yellow (2.5 Y 7/8) to (2.5 Y 7/6). Sand: 95%, very fine to fine grained, predominately fine grained,  |      |             | A A A A A A A A A A A A A A A A A A A                |            |                         |                     |                 |                     |        |                  |

| Sam                             |                                 |             |               |  |      |             |   |             |                         |                     | Soil Pr         | operties            | ge 45 | _                |
|---------------------------------|---------------------------------|-------------|---------------|--|------|-------------|---|-------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples  | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram                            | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
| (205.8-<br>205.9)<br>VOCs<br>AF |                                 |             | -<br>- 206.0  | subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, very poorly cemented from 207.9 – 208.3', soft and friable, fine grained, slight weathering on the outside of the  |      |             | A X X X X X X X X X X X X X X X X X X X |             |                         |                     |                 |                     |       |                  |
| (206.2-<br>206.3)<br>VOCs<br>BF |                                 |             | 5             | core as well as on the fracture faces, horizontally thinly bedded to laminated shallow angle cross beds, predominately laminated shallow angle cross beds, sandstone displays trace bands of oxidized iron and limonite staining that follow bedding planes, highly to intensely jointed, predominately highly jointed,                    |      |             | X                                       |             |                         |                     |                 |                     |       |                  |
| (206.9-<br>207)<br>VOCs<br>BET  |                                 |             | - 207.0       | pores to pits throughout, trace pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, healed horizontal and shallow angle hairline fractures are filled with iron precipitate and follow bedding planes, open fractures occur at bedding planes and are horizontal to shallow in attitude, |      |             |   |             |                         | Si                  |                 |                     |       |                  |
|                                 |                                 |             | -             | fractures range from tight to open, predominately tight, fracture faces are irregular to smooth and soft due to friability and display secondary mineralization of iron precipitate and limonite and in filling of clay and very fine sand.  |      |             |   |             |                         |                     |                 |                     |       |                  |
|                                 |                                 |             | - 208.0       |  |      |             |   |             |                         |                     |                 |                     |       |                  |
|                                 |                                 |             | -             | s.   |      |             |   |             |                         | 14.7%               |                 |                     |       |                  |
|                                 | 4.8'                            |             | 209.0         | SANDSTONE: Pale yellow (2.5 Y 8/2) to  |      |             |   | 5.01<br>ppm |                         |                     |                 |                     |       | 53.3%<br>Fair    |
|                                 |                                 |             | -             | yellow (2.5 Y 7/8). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to subangular, Clay and Iron precipitate: 5%, sandstone is well sorted, moderate to poorly cemented with quartz and iron precipitate cement, soft and friable, fine grained, slight weathering on the outside of the core as              |      |             | ×                                       |             |                         |                     |                 |                     |       |                  |
| (209.8-<br>209.9)<br>VOCs<br>AF |                                 |             | - 210.0       | well as on the fracture faces, horizontally<br>thinly bedded to laminated shallow angle<br>cross beds, predominately laminated<br>shallow angle cross beds, sandstone<br>displays some bands of oxidized iron and<br>limonite staining that follow bedding   |      |             | X X X X X X X X X X X X X X X X X X X   |             |                         |                     |                 |                     |       |                  |

| Sam                              |                                 |             |               |   |      |             |  |             |                         |                     | Soil P | roperties           |       |                    |
|----------------------------------|---------------------------------|-------------|---------------|---|------|-------------|--|-------------|-------------------------|---------------------|--------|---------------------|-------|--------------------|
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit   | nscs | Graphic Log | Well Diagram                                       | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid | Placticity<br>Index | P 200 | RQD/<br>Comments   |
| (211.1-<br>(211.2)<br>VOCs<br>f9 |                                 |             | - 211.0       | partings that follow bedding planes, highly to intensely jointed, predominately highly jointed, pores to pits throughout, little pores and pits are filled with iron nodules and have iron and limonite staining/precipitation rimming the pits, little to some bioturbation where burrows are filled with pale green clay and rimmed with iron precipitate, healed horizontal and shallow angle hairline fractures are filled with iron precipitate and follow bedding planes, open fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are irregular to smooth and soft due to friability and display secondary mineralization of iron precipitate and limonite and in filling of clay and very fine sand. |      |             | A PANKATAN YAKAKAKAKAKAKAKAKAKAKAKAKAKAKAKAKAKAKAK |             |                         | 42                  |        |                     |       |                    |
| 212.2-<br>212.3)<br>VOCs<br>AF   |                                 |             | - 212.0       |   |      |             | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \              |             |                         |                     |        |                     |       |                    |
| 213.1-<br>213.2)<br>VOCs<br>AF   |                                 |             | - 213.0       |   |      |             | X  |             |                         |                     |        |                     |       |                    |
|                                  | 2.8'                            |             | 214.0         | 214.0 – 216.7' SANDSTONE: Pale yellow (2.5 Y 7/3). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz   |      |             | N  | 3.55<br>ppm |                         |                     |        |                     |       | 0%<br>Very<br>Poor |

|                                  |                                 | _           |               |  | т —  |             |   |     |                         |                     | G "1 D          |                     | ige 47 | DI 32            |
|----------------------------------|---------------------------------|-------------|---------------|--|------|-------------|---|-----|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Sam                              |                                 |             |               |  |      |             |   |     |                         |                     | Soil Pr         | operties            |        |                  |
| Fracture<br>Surface<br>Samples   | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | nscs | Graphic Log | Well Diagram                            | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
| (214.8-<br>214.9)<br>VOCs<br>BET |                                 |             | - 215.0       | cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, laminated clay bed at 214.3', trace pores to pits throughout, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, horizontal hairline healed fractures are filled with iron precipitate, fractures range from tight to open, predominately tight, fracture faces are horizontal and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             | Y X X A X A X X X X X X X X X X X X X X |     |                         |                     |                 |                     |        |                  |
| (216.1-<br>216.2)<br>VOCs<br>BF  |                                 |             | - 216.0       |  |      |             | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \   |     |                         |                     |                 |                     |        |                  |
|                                  |                                 |             | - 217.0       |  |      |             |   |     |                         |                     |                 |                     |        |                  |
|                                  | E5                              |             | - 218.0       |  |      |             |   |     |                         |                     |                 |                     |        |                  |
|                                  |                                 |             | -             |  |      |             |   |     |                         |                     |                 | 17 99               |        |                  |

| Sam                             | ple          | _           |                    |  |      |             |              |          |                         |                     | Soil Pro        | perties              |       |                       |
|---------------------------------|--------------|-------------|--------------------|--|------|-------------|--------------|----------|-------------------------|---------------------|-----------------|----------------------|-------|-----------------------|
| Fracture<br>Surface<br>Samples  | t. &<br>(in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID      | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity.<br>Index | P 200 | RQD/<br>Comments      |
| (219.8-<br>219.9)<br>VOCs<br>AF | 4.4'         |             | - 219.0<br>- 220.0 | 219.0 – 223.3' SANDSTONE: Pale yellow (2.5 Y 7/3). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately open, fracture faces are horizontal to irregular and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand. |      |             |              | 2.46 ppm |                         |                     |                 |                      |       | 23.3%<br>Very<br>Poor |
| (221.2-<br>221.3)<br>VOCs<br>BF |              |             | - 221.0<br>-       |  |      |             |              |          |                         |                     |                 |                      |       | 5.4                   |
| (222.6-<br>222.7)<br>VOCs<br>BF |              |             | - 223.0            |  |      |             |              |          | 击                       |                     |                 |                      |       |                       |

| Sam   | ple                             |             |               |  |      |             |              |            |                         |                     | Soil Pr         | operties            | ige 49 | _                |
|---|---------------------------------|-------------|---------------|--|------|-------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------|
| Fracture<br>Surface<br>Samples                                      | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200  | RQD/<br>Comments |
|   | 4.9'                            |             | 224.0         | 224.0 – 225.2' SANDSTONE: Pale yellow (2.5 Y 7/3). Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate: 5%, sandstone is very well sorted, moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely |      |             |              | 9.7<br>ppm |                         |                     |                 |                     |        | 31.7%<br>Poor    |
| 224.8-<br>224.9)<br>VOCs<br>BET<br>225.2-<br>225.7)<br>PHYS<br>PROP |                                 |             | - 225.0<br>-  | jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately open, fracture faces are horizontal to irregular and smooth  |      |             |              |            |                         | 16.5%<br>13.7%      |                 |                     |        |                  |
| 226.3-<br>226.4)<br>VOCs<br>BET                                     |                                 |             | - 226.0       | moderate to poorly cemented with quartz cement, soft and friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, sandstone displays trace bands of faint oxidized iron staining that follow bedding planes, highly to intensely jointed, fractures occur at bedding   |      |             |              |            |                         |                     |                 | ;                   |        |                  |
| 227.4-<br>227.5)<br>VOCs<br>BF                                      |                                 |             | - 227.0       | planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately open, fracture faces are horizontal to irregular and smooth due to friability and display secondary mineralization of iron precipitate and in filling of clay and very fine sand.  |      |             |              | •          |                         |                     |                 |                     |        |                  |

| C                              |   |             |               |  | Т    | T           |              |             | Т                       |                     | G 11 D  |                     | ige 50 | T 7                 |
|--------------------------------|---|-------------|---------------|--|------|-------------|--------------|-------------|-------------------------|---------------------|---------|---------------------|--------|---------------------|
| Sam                            |   | unts        | Feet          | Soil/Rock Description  |      | go.         | ram          |             | ive                     |                     | 5011 Pr | operties            |        |                     |
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in)             | Blow Counts | Depth in Feet | And Geologic Origin For<br>Each Major Unit   | NSCS | Graphic Log | Well Diagram | FID         | Compressive<br>Strength | Moisture<br>Content | Liquid  | Placticity<br>Index | P 200  | RQD/<br>Comments    |
| 40201                          | <u>                                    </u> |             |               |  |      | 1 6         |              |             | 10 %                    | 20                  |         | P 1                 |        | [ # O               |
|                                |   |             |               |  |      |             |              |             |                         |                     |         |                     |        |                     |
| (228-                          |   |             | 228.0         |  |      |             |              |             |                         |                     |         |                     |        |                     |
| VOCs<br>BET                    |   |             | -             |  |      |             |              |             |                         |                     |         |                     |        | :                   |
|                                |   |             | -             |  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | - ,           |  | į.   |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             |               |  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | 000.0         |  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                | 4.7'  |             | - 229.0       | 229.0 – 231.7'<br>SANDSTONE: Pale yellow (2.5 Y 7/3).  |      |             |              | 1.95<br>ppm |                         |                     |         |                     |        | 15%<br>Very<br>Poor |
|                                |   |             | ŗ             | Sand: 95%, very fine to fine grained, predominately fine grained, subrounded to rounded, Clay and Iron precipitate:  |      |             |              |             |                         |                     |         |                     |        |                     |
| (229.5-                        |   |             | -             | 5%, sandstone is very well sorted,<br>moderate to poorly cemented with quartz<br>cement, soft and friable, fine grained,<br>very slight weathering on the outside of |      |             |              |             |                         |                     |         |                     |        |                     |
| VOCs<br>BET                    |   |             | -             | the core as well as on the fracture faces,<br>bedding is horizontally laminated to<br>laminated shallow angle hummocky   |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | -             | cross beds, laminated clay and oxidized iron precipitate beds at 229.7' and 231.1', sandstone displays trace bands of faint  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | - 230.0       |  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | -             | and have iron and limonite staining/precipitation rimming the pits, highly to intensely jointed, fractures occur   |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             |               | at bedding planes and are horizontal to<br>shallow in attitude, fractures range from<br>tight to open, predominately open,   |      |             |              |             |                         |                     |         | ]                   |        | !                   |
|                                |   |             | -             | fracture faces are horizontal to irregular<br>and smooth due to friability and display<br>secondary mineralization of iron   |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | -             | precipitate and in filling of clay and very fine sand.  NOTE: Eau Claire Formation begins at   |      |             |              |             |                         |                     |         |                     |        |                     |
| (230.9-<br>231)<br>VOCs        |   |             | - 231.0       | ~231.7' bgs.   |      |             |              |             |                         |                     |         |                     |        |                     |
| BF                             |   |             | -             |  |      |             |              |             | i                       |                     |         |                     |        |                     |
|                                |   |             | -             | 231.7 - EOB  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             | -             | Elk Mound Group<br>Eau Claire Formation  |      |             |              |             |                         |                     |         |                     |        |                     |
|                                |   |             |               | SANDSTONE: very fine to fine grained, subround grains, moderately hard, moderately cemented, highly jointed,   |      | 1           |              |             |                         |                     |         |                     | i      |                     |
| (232-                          |   |             | - 232.0       | joints are horizontal, little hairline vertical fractures, planar to irregular bedding,  |      | 5           |              |             |                         |                     |         |                     |        |                     |
| (202-                          |   |             | 232.0         | fracture faces, interbedded shale and  |      | LL\         |              |             |                         |                     |         |                     |        |                     |

|                                   | -                               |             |                    |  |      |                                    | 1            |            |                         |                     |                 |                     | ge 51 | DI 32            |
|-----------------------------------|---------------------------------|-------------|--------------------|--|------|------------------------------------|--------------|------------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| San                               | nple                            |             |                    |  |      |                                    |              |            |                         |                     | Soil Pr         | operties            |       |                  |
| Fracture<br>Surface<br>Samples    | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet      | Soil/Rock Description And Geologic Origin For Each Major Unit  | nscs | Graphic Log                        | Well Diagram | FID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD.<br>Comments |
| 232.1)<br>VOCs<br>BET             |                                 |             | -                  | sandstone, shale partings to laminations along bedding planes, trace pits, trace iron staining, low to moderate nearshore environment.   |      |                                    |              |            |                         |                     |                 |                     |       |                  |
| (233.1-<br>233.2)<br>VOCs<br>BF   |                                 |             | -<br>- 233.0<br>-  | 231.7 – 233.5' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is very well sorted, moderately cemented with quartz cement, semi-friable and soft, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, some bioturbation where burrows are filled with a bluishgray very fine grained silty sand and clay, secondary mineralization of pyrite, highly to intensely jointed, predominately highly jointed, fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are horizontal to irregular and are smooth due to friability and display in filling of clay and very fine sand. |      | 1/2/12/12/12/12/12/12/12/12/12/12/ |              |            |                         |                     |                 |                     |       |                  |
| (234.3-<br>234.8)<br>PHYS<br>PROP | 2.8'                            |             | - 234.0-<br>-<br>- | 234.0 – 234.4' SANDSTONE: White (2.5 YR 8/1). Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is well sorted, moderately hard, moderately well cemented with clay and quartz cement, semi-friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is   |      |                                    |              | 8.1<br>ppm |                         | 9.0%                |                 |                     |       | 50%<br>Fair      |
| (234.8-<br>234.9)<br>VOCs<br>AF   |                                 |             | -<br>- 235.0       | horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, little horizontal to shallow angle laminated partings of pale green shale that follow bedding planes, little bioturbation where burrows are filled with a bluish-gray very fine grained silty sand and clay, highly jointed, sandstone contains little pyrite mineralization throughout that are very fine grained in size, little pores to vugs throughout, pits and vugs are filled with very fine sand and clay as well as   | 1    |                                    |              |            |                         |                     |                 |                     |       |                  |
| (236-<br>236.1)<br>VOCs<br>BF     |                                 |             | -<br>- 236.0<br>-  | secondary mineralization of euhedral pyrite, little vertical hairline fractures are filled with very fine sand, open fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are irregular and are smooth due to friability and display in filling of clay and very fine sand as well as pyrite.  234.4 – 234.9' PHYSICAL PROPERTIES SAMPLE  234.9 – 236.8' SANDSTONE: White (2.5 YR 8/1).  |      |                                    |              |            |                         |                     |                 |                     |       |                  |

| Sam                            | ^ I                             |             |                               |  |      |             |              |     |                         |                     | Soil Pr         | operties            |       |                  |
|--------------------------------|---------------------------------|-------------|-------------------------------|--|------|-------------|--------------|-----|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Fracture<br>Surface<br>Samples | Length Att. &<br>Recovered (in) | Blow Counts | Depth in Feet                 | Soil/Rock Description And Geologic Origin For Each Major Unit  | USCS | Graphic Log | Well Diagram | FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200 | RQD/<br>Comments |
|                                | 0.0'                            |             | - 237.0<br>- 238.0<br>- 239.0 | Sand: 95%, very fine to fine, predominately very fine, subangular to subrounded, Clay: 5%, sandstone is well sorted, moderately hard, moderately well cemented with clay and quartz cement, semi-friable, fine grained, very slight weathering on the outside of the core as well as on the fracture faces, bedding is horizontally laminated to laminated shallow angle hummocky cross beds, predominately laminated cross beds, little horizontal to shallow angle laminated partings of pale green shale that follow bedding planes, little bioturbation where burrows are filled with a bluish-gray very fine grained silty sand and clay, highly jointed, sandstone contains little pyrite mineralization throughout that are very fine grained in size, little pores to vugs throughout, pits and vugs are filled with very fine sand and clay as well as secondary mineralization of euhedral pyrite, little vertical hairline fractures are filled with very fine sand, open fractures occur at bedding planes and are horizontal to shallow in attitude, fractures range from tight to open, predominately tight, fracture faces are irregular and are smooth due to friability and display in filling of clay and very fine sand as well as pyrite.  EOB at 237.0'  NOTE:  BET - Between closely spaced fractures. AF - Above Fracture Surface. BF - Below fracture surface. |      |             |              | NM  |                         |                     |                 |                     |       | NM               |
|                                |                                 |             |                               | BKN - Broken or crumbled section. NA - Not applicable.   |      |             |              |     |                         |                     |                 |                     |       |                  |

| Gard Wester   Underground Tanks   Undergroun   |           | of Wisc    |         | ral Resour                                   | rces Route To:          |              | J Haz. | Waste    |          |          | SOIL I        | 30RII<br>orm 4400 |           | OG IN    | IFOR       | MATI     | 7-91     |
|--|-----------|------------|---------|--|-------------------------|--------------|--------|----------|----------|----------|---------------|-------------------|-----------|----------|------------|----------|----------|
| Energency Response   Other   Date Deling Completed   MyV-6   |           |            |         |  |                         | {            | □ Unde | ergroun  | d Tanl   | cs       |               |                   |           |          |            |          |          |
| Earliery   Project Name   Licenses/Permit/Monitoring Number   Monitoring Number   Mo   |           |            |         |  |                         |              |        |          | urces    |          |               |                   |           |          |            |          | 4        |
| Markison Kipp Boring printed by Firm name and name of crew chief) Badger State Drilling—Kevin McCumber    Common Weel Name   |           |            |         |  | ☐ Emergency Ro          | esponse [    | Othe   | <u> </u> |          |          |               |                   |           |          |            | of       | <u> </u> |
| Boring Dicasion Badger State Drilling—Kevin McCumber  Badger State Drilling—Kevin McCumber  MW-6S  Common Well Name  MW-6S  Number Freet MSL  Local Grid Location (if Name)  Feet MSL  Common Well Name  Freet MSL  Common Well Nam | Facilit   | y / Proj   | ect Nar | me   |                         |              | Lice   | nse/Pe   | mit/M    | onitorin | g Numb        | er                | В         |          |            |          |          |
| Badger State Drilling-Kevin McCumber   D. J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J. 03   J. 04   J.   | <u>Ma</u> | dison      | Kipp    | )  |                         |              | Data ( |          | Ctoutor  |          | I Data        | Dellina           | - L       |          |            | na Mat   | had      |
| MM   DD   YY   MM   DD   YY   Alfr (Rotted)  |           |            |         |  |                         |              |        | _        |          |          |               | _                 |           |          | 4          | 1/4" I   | D HSA/   |
| Boring Location Boring Locatio | Bac       | iger S     | State I | Orilling-                                    | Kevin McCumber          |              |        | - /D     | <u> </u> | YY       |               |                   | DD /      | YY       | A          | ir Rot   | агу      |
| MW-6S  | TO VIEW   | Hatalin.   | WA W    | i V  |                         | ell Name     | Final  | Static V | Vater L  | .evei    | Surfa         | ce Eleva          | ition     |          | Bore       | hole Di  | iameter  |
| State Plane  NES/CM. Act of SW. 144 of Section   |           |            |         | <u>:                                    </u> | MW-6S                   |              |        | F        | eet M    | SL       |               |                   |           |          |            | 8.5      | inches   |
| Sample   S   |           |            | ion     |  | N· ES                   | /C/N         | ı La   | ıt —     | _        | -        | Local         | Grid Lo           |           |          | able)      |          | 0.5      |
| Direction   Dire   |           |            | - om    | 44.45  |                         |              | Long   | 9 —      |          |          |               | Fe                |           |          |            | Fe       |          |
| 1 3   City of Madison  |           |            | SW      | 1/4 01 0                                     | ection                  | DNR County   | / Code | 1        | Civil To | wn / C   | ity / or V    | illage            |           |          |            |          |          |
| Sol/Rock Description And Geologic Origin For Each Major Unit  Sol/Rock Description And Geologic Origin For Each Major Unit  Asphalt Parking Lot Blind Drill to 41.4 feet BGS Well screened from 41.4 to 31.4 feet BGS  Well screened from 41.4 to 31.4 feet BGS  |           | -          |         |  | S                       | 1            | 3      |          | Cit      | y of N   | <b>Madiso</b> | n                 |           |          |            |          |          |
| Soil/Rock Description   Soil   |           |            |         | ,  |                         |              |        | <u> </u> |          |          |               |                   | Soil Pr   | ocerties |            |          | 0        |
| Asphalt Parking Lot  Blind Drill to 41.4 feet BGS Well screened from 41.4 to 31.4 feet BGS   | овтр      |            | 3       |  |                         |              |        |          | , p      | E I      |               | c                 | 1         | <u> </u> | <u> </u>   |          | Tue.     |
| Asphalt Parking Lot  Blind Drill to 41.4 feet BGS Well screened from 41.4 to 31.4 feet BGS   | 70        | 2          | nuta    | Fee  |                         |              |        |          | 5<br>7   | Diagr    | Ω             | agio<br>Bigin     | 8 5       |          | , i        |          | Ř        |
| Asphalt Parking Lot  Blind Drill to 41.4 feet BGS Well screened from 41.4 to 31.4 feet BGS   | qua       | th<br>year | ŏ       | 훈  |                         |              |        | ပ္တြ     | g        | Vell (   | Ō.            | ene ene           | fort fort |          | Tast<br>Li | 8        | ž        |
| Asphalt Parking Lot  Blind Drill to 41.4 feet BGS  Well screened from 41.4 to 31.4 feet BGS  | 2         | Red A      | 8       | De D   |                         | THIL         |        | -        | 9        | >        | Δ_            | O) L              | 20        |          | D. J       | α.       | ŭ.       |
| Well screened from 41.4 to 31.4 feet BGS   |           |            |         | E  | Asphalt Parking Lot     |              |        |          | -        |          |               |                   |           |          |            |          |          |
| Well screened from 41.4 to 31.4 feet BGS   |           |            |         | E.,  |                         |              |        |          | - 12     |          |               | 1                 | 1         |          |            |          |          |
| - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 12 - 13 - 14  |           |            |         | 는 '  | Well screened from 41.4 | to 31.4 feet | BGS    |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | _ <sub>2</sub>                               |                         |              |        |          |          |          |               | -                 |           |          |            |          |          |
|  |           |            |         | E  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | 上。   |                         |              |        | 1        |          |          |               | 93                | 1         |          | ,          |          |          |
| - 6<br>- 7<br>- 8<br>- 9<br>- 10<br>- 11<br>- 12<br>- 13<br>- 13<br>- 14   |           | 1          |         | _ "  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| - 6<br>- 7<br>- 8<br>- 9<br>- 10<br>- 11<br>- 12<br>- 13<br>- 13<br>- 14   |           |            |         | L 4  | 0                       |              |        |          |          |          |               |                   |           |          | 1          |          |          |
| - 6<br>- 7<br>- 8<br>- 9<br>- 10<br>- 11<br>- 12<br>- 13<br>- 13<br>- 14   |           |            |         | <b>=</b>                                     |                         |              |        |          |          |          |               |                   |           | 1        |            | l        |          |
| - 6<br>- 7<br>- 8<br>- 9<br>- 10<br>- 11<br>- 12<br>- 13<br>- 13<br>- 14   |           | 1          |         | _ 5  |                         |              |        |          |          |          |               | 1                 |           |          |            |          |          |
| - 7<br>- 8<br>- 0<br>- 10<br>- 11<br>- 12<br>- 13<br>- 14  |           |            |         | = _  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           | -          | 1       | 6  | 8                       |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | -  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| 13<br>14   |           |            |         | 7  | 2                       |              |        | 1        |          |          |               |                   |           |          | 1          |          |          |
| 13<br>14   |           |            |         | =  |                         |              |        |          |          |          |               |                   |           |          |            | 1        |          |
| 13<br>14   |           |            |         | 8  |                         |              |        | 1        |          |          |               |                   |           |          |            |          |          |
| 13<br>14   |           |            |         | =  |                         |              |        | 1        |          |          |               |                   |           |          | 1          |          |          |
| 13<br>14   |           |            |         | 9  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| 13<br>14   |           |            |         | =  |                         |              |        |          |          |          |               | 1                 |           |          |            |          |          |
| 13<br>14   |           |            |         | - 10   |                         |              |        |          |          |          |               |                   | 1         |          |            |          |          |
| 13<br>14   |           |            |         | =  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| 13<br>14   |           |            |         | 11   |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| 13<br>14   |           |            |         | =  |                         |              |        |          |          |          |               |                   |           |          |            | 1        |          |
|  |           |            |         | 12   |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | -  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | 13   |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
| - 14   |           |            |         | =  |                         |              |        |          |          |          |               |                   |           |          |            |          |          |
|  |           |            |         | 114  |                         |              |        | 1        |          | <u> </u> | <u> </u>      | 1                 | J .       | 1        | <u> </u>   | <u> </u> | 1        |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to as 144.99 and 162.06, Wis. Stats

Firm

URS Corporation, Madison, WI

|                   | of Wisc                 |                 | ral Resoul    | rces Route To:                      |                       | ☐ Haz        |                    |             |  | SOIL I     | BORII                   |  | OG IN   | IFOR             | MAT               | ION          | 7-91     |
|-------------------|-------------------------|-----------------|---------------|-------------------------------------|-----------------------|--------------|--------------------|-------------|--|------------|-------------------------|--|---|------------------|-------------------|--------------|----------|
|                   |                         |                 |               | ☐ Wastew                            |                       |              | ergrour<br>er Resc |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 |               | □ Emerge                            | ency Response         | ☐ Oth        | er                 |             | <u>.                                    </u> |            |                         |  | · P   | age1             | of_               | 4_           |          |
|                   | y / Proj                |                 |               |                                     | 12                    | Lice         | ense/Pe            | rmit/M      | lonitori                                     | ng Numb    | er                      | 8                                      | loring N  |                  |                   |              |          |
| Ma                | dison                   | Kipp<br>t By (F | im name       | and name of crew chief)             |                       | Date         | Drilling:          | Starte      | <del></del>                                  | Date       | Drilling                | Comple                                 | MW-<br>ted  |                  | ing Met           | hod          |          |
|                   |                         |                 |               | -Kevin McCumber                     |                       |              | L /_0              | 3. /-       | 03   |            | 02 /-                   | 04 /                                   | 03  |                  | 1/4"]             |              | SA/      |
| Commission of the |                         |                 |               |                                     | non Well Name         | M M<br>Final | D<br>Static V      |             | Level  | Surfa      | M<br>ce Eleva           | D D<br>tion                            | YY  |                  | ir Rot<br>shole D |              | <u> </u> |
| He VIE            | Hereliky                | V/SHAN          |               | MW MW                               |                       |              | F                  | eet M       | SL   |            |                         | _ Feet I                               | MSL   |                  | 10.5              | inche        | S        |
| Boring            | Locati                  | on              |               | N.                                  | E S/C/N               | ا ا          | at                 | -           | _  | Loca       | Grid Lo                 |  | If Applic   | able)            |                   | r            | l E      |
|                   |                         | r SW            | 1/4 of S      | 1                                   | N,R <u>10_</u> E      | Lon          | g <u> </u>         |             | _  | 1          | Fe                      |  | S   |                  | Fe                |              | 3 W      |
| Count             |                         |                 |               |                                     | DNR Count             |              | 1                  |             |  | ity / or V | _                       |  |   |                  |                   |              |          |
|                   | Dane                    |                 |               |                                     | 1_1_                  | 3            |                    | Cit         | y of l                                       | Madiso     | n                       |  |   |                  |                   |              |          |
| Samp              |                         | 2               |               |                                     |                       |              |                    |             | ε  |            |                         | Soil Pr                                | opertie:  | s<br>1           | olyddig y dellyn  | ants         |          |
| _                 | Ŝ.                      | umts (          | Feet<br>te    | Soll/Rock De                        |                       |              |                    | Sp          | lagra  | 0          | 캶                       | e =                                    |   |                  |                   | E C          |          |
| Number            | Length<br>Recovered (N) | Blow Counts (N) | Depth In Feet | And Geologic                        |                       |              | SSS                | Graphic Log | Weil Diagram                                 | PID/FID    | Standard<br>Penetration | Moisture                               | Pig<br>Cing<br>Cing<br>Cing<br>Cing<br>Cing<br>Cing<br>Cing<br>Ci | Plastic<br>Limit | P 200             | ROD/Comments |          |
|                   | Reck                    | 욻               | å             | Each Maj                            |                       |              | )                  | O           | >  | <u> </u>   | ω <sub>L</sub>          | 20                                     | 22  |                  | ۵.                | Æ:           |          |
| 95                |                         |                 |               | Asphalt Parking L                   |                       |              |                    | 333         |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | F 1           | FILL, gravelly, sand                | ly, silty, brown      |              | GM                 | ***         |  |            |                         |  |   |                  | ļ                 |              |          |
|                   |                         |                 | - 2           |                                     |                       |              |                    |             |  |            | ĺ                       |  |   |                  | /:<br>            |              |          |
|                   |                         |                 | E 1           |                                     |                       |              |                    | H           |  |            |                         |  |   |                  |                   |              |          |
|                   |                         | 11,8            | - 3           |                                     |                       |              |                    | ***         |  |            | 20                      |  |   |                  |                   |              |          |
| <sub>[2]</sub> 1  | 19                      | 12,17           | F             | CLAY, silty, stiff, s               |                       | W            | CT                 |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | - 4           | plasticity, light brov              | νп                    |              |                    |             |  |            |                         |  | φ.  |                  |                   |              |          |
|                   |                         |                 |               |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         | ,               | 5             |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | - 6           |                                     |                       |              |                    |             |  |            |                         |  |   | ŀ                |                   |              |          |
|                   |                         |                 | E             | 19                                  |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | 7             | "                                   |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         | 13,15           | =             | 0                                   |                       |              | <u> </u>           |             |  |            |                         |  |   |                  |                   |              |          |
| 2                 | 18                      | 16,19           | E             | SAND, gravelly, fir                 | e to medium gra       | ained,       | SP                 |             |  | ł          | 31                      | -                                      |   |                  |                   |              |          |
|                   |                         |                 | - 9           | dense, slightly mois reddish brown. | t, light brown to     |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 |               | redustrotown.                       |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | 10            | 21                                  |                       |              |                    | q           |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | =             |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | - 11          |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
|                   |                         |                 | 12            |                                     |                       |              |                    |             |  |            |                         |  |   |                  | i.                |              |          |
|                   |                         |                 | -             |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
| 3                 | 16                      | 29,37<br>24,34  | 13            | SAND, as above, very                | dense, light brown    | n            |                    |             |  |            | 61                      |  |   |                  |                   |              |          |
|                   |                         | *ربد            | È             |                                     |                       |              |                    |             |  |            |                         |  |   |                  |                   |              |          |
| I here            | by cert                 | ify that        | the inform    | nation on this form is true ar      | d correct to the best | of my kn     | owledg             | <u></u>     | SI   |            |                         | ······································ | 1   |                  |                   | -            |          |

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$4,000 for each violation. Fines not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats

Firm

URS Corporation, Madison, WI

Signature

State of Wisconsin Department of Natural Resources

## SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A 7-91

| Borin  | g Num                    | ber             | MW-6                             | BD_   | COIII. |  |              |         |                         |                     | Pa              | age _2           | of    | 4            |
|--------|--------------------------|-----------------|----------------------------------|---|--------|--|--------------|---------|-------------------------|---------------------|-----------------|------------------|-------|--------------|
| Samp   | ie                       |                 |                                  | ,   |        |  | _            |         |                         | Soil Pr             |                 |                  |       |              |
| Number | Length<br>Recovered (IN) | Blow Counts (N) | Depth in Feet                    | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit                           | nscs   | Graphic Log  | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | ROD/Comments |
| 4      |                          | 23,32<br>36,38  | 15<br>16<br>17<br>18<br>19       | SAND, as above, very dense, light brown SAND, as above  | SP     |  |              | 8       | 68                      |                     |                 | ж                |       |              |
| 5      | 14                       | 39,<br>50/4     | 22 23 24 25                      | SAND, as above, very dense, brown   |        | •  |              |         |                         |                     |                 |                  |       | 11           |
| 6      | 12                       | 26,39<br>64/4   | 25<br>27<br>28<br>29<br>30<br>31 | SAND, as above  | SP     |  | ×            |         |                         |                     |                 |                  |       | ς.           |
| 7      | 6                        | 50/1<br>50/4    | 32 33 35 36                      | SANDSTONE, glauconitic, very weathered slightly moist, no odor, dull green to brownish green. | BR     | 18 The Control of the |              |         |                         |                     |                 |                  |       |              |

| State  | of Wisc                  | onsin<br>of Natu | ral Resour    | pes   | SOIL<br>Form |             |              | NG LOG  | INFO                    | ORMA                | TION    |                  |        | 7-91         |
|--------|--------------------------|------------------|---------------|---|--------------|-------------|--------------|---------|-------------------------|---------------------|---------|------------------|--------|--------------|
| _      | g Numb                   |                  | MW-6          |   |              |             | _            |         |                         |                     |         |                  | _ of4  |              |
| Same   | ole                      |                  |               |   |              | _           | ε            |         |                         | Soil Pro            | perties | ·                |        | nents        |
| Number | Length<br>Recovered (IN) | Blow Counts (N)  | Depth in Feet | Soll/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs         | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid  | Plastic<br>Limit | P. 200 | ROD/Comments |
| Ž      | Len<br>Rec               | 18               | 36            | SANDSTONE, as above, increasing moisture with depth  SANDSTONE, brown, increasing moisture with depth  SANDSTONE, as above, wet | BR           |             |              |         |                         |                     |         |                  |        |              |

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A 7-91

| Department of N                    | B 40 47 C                                |   | roini 4 | H-00-       | 122/1        |         |                         |                     | Ps    | ge_3                        | of    | 4            |
|------------------------------------|--|---|---------|-------------|--------------|---------|-------------------------|---------------------|-------|-----------------------------|-------|--------------|
| Boring Number                      |  |   | -       |             |              |         |                         | Soil Pro            |       |                             |       |              |
| Number<br>Length<br>Recovered (IN) | Blow Counts (N) Depth in Feet            | Soll/Rock Description<br>And Geologic Origin For<br>Each Major Unit | uscs    | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Í     | Plastic<br>Limit            | P 200 | ROD/Comments |
| Number Length Recovered            | 19 19 19 19 19 19 19 19 19 19 19 19 19 1 | And Geologic Origin For   | BR      | Graphic     | Well Dis     | OIE/OIE | Stander<br>Penetra      | Moistur             | Limit | Plastic Plastic Limit Limit | P 200 | RODIC        |
|                                    | 76                                       |   |         |             |              |         |                         |                     |       |                             |       |              |
|                                    | 78<br><br>79                             |   |         |             |              |         |                         |                     |       |                             |       |              |

| STOUC  | HTON,  | WISCO        | MSIN                     |  | j)  |                | FIELD BORING LOG   | Jol            | No.                    | 5        | 62:  | 2  |                          |
|--|--|--------------|--------------------------|--|---|----------------|--|----------------|------------------------|----------|--|--|--------------------------|
| FOR .  | M  | 4P 1         | 56A)                     | /  | <b>€</b> 7;                                   | P              | <del>Paragraphic and the second se</del> | RA             | rina N                 | io       | MW-  | 7  | उद्गा रह                 |
|  |  |              | D/50                     | 17   | <u>()                                    </u> | (VIII          | ELEV: Time after drilling  |                | 9.17                   |          | art Z  |  |                          |
|  | OUN  |              | Inile drill<br>efore cas |  | omour   | <br>.1         | Depth to water   | <del></del>    |                        | 111      | nit Z  | -22  | <u>مەت</u> ت.<br>ئالام ئ |
| W  | ATEF   |              | iter casir               |  |   |                | Deplir to cave-in  |                |                        | CI       | iit <u>Zo</u><br>ilel <u>A</u>                   | . جريا   | - /                      |
|  | .03  | Blov         |                          | 100  |   | <u> </u>       | Casing/Probe   | <del></del>    | ٦.                     | 1        | Blow   | vs on  | T                        |
| Sample<br>No.  | Molature   | San          | npler                    | S S  | Total Blows                                   |                | VISUAL FIELD CLASSIFICATION AND REMARKS Weight   |                | Unconfined<br>Strength | Boulders | T  |  | 1                        |
| Ö,   | ž  | 0/6          | 6/12                     | w.   | Total   |                | Drop   |                | S S                    | នី       | Casing<br>Size                                   | Probe<br>Size                                    | 1                        |
|  | i<br>Promiser                                    |              | 0/12                     | -  | <br>  |                |  | 7 =            | -                      | ╁╌       | 44   | a in   | Z                        |
|  |  |              |                          | -  |   | =              | Bent Delle 4'4 454 TO 35   | Ξ              |                        | H        | 1-7  |  | Ť                        |
|  |  |              |                          |  |   | _              |  | Ξ              |                        |          |  |  | Ι                        |
|  |  |              |                          |  |   |                | l <sub>w</sub>   | 1              |                        | <u> </u> |  |  | 1                        |
|  |  | <del> </del> | ar<br>Çeriyin ba         | -  | -   | <br>5          | <b>√</b>   | 5              |                        | ╀        |  |  | +                        |
|  | 141  |              |                          | -  |   | Ξ,             |  |                |                        | 1        | <b>!</b>   | <b> </b>   | t                        |
| -t-links   |  |              |                          |  |   | <del>-</del> . |  | =              |                        |          |  |  | I                        |
|  |  |              |                          |  |   | Ξ.             |  | =              |                        | _        |  |  | +                        |
|  |  |              |                          | $\vdash$   |   |                | j,   | 10             | 1                      | -        |  | -  | +                        |
|  |  | ,            |                          | -  |   | =              |  | -              | -                      | +        | <del>                                     </del> |  | t                        |
|  |  | STORY OF     |                          | -  |   |                |  | =              |                        |          | 18000  | 7 100  | İ                        |
| arana ana  |  |              |                          |  |   | Ξ              |  | _              |                        |          |  |  | 1                        |
|  | .n   | F            |                          |  |   |                | 5  | 15             |                        | 1        | ┝  | -  | +                        |
|  |  |              |                          | -  | -   | =              |  | Ξ              | -                      | $\vdash$ | <del>                                     </del> | -  | t                        |
|  |  | <del></del>  |                          |  |   | =              |  | Ξ              |                        |          |  |  | İ                        |
|  |  |              |                          |  |   | _              |  | Ξ              |                        | L        |  |  | 1                        |
|  |  |              |                          |  |   | <u></u> 2      | <b>j.</b>  | 20             | 1                      | 1        |  | accept to  | +                        |
|  |  |              | <u> </u>                 | $\vdash$   |   | Ξ              | · · · · · · · · · · · · · · · · · · ·  | Ξ              |                        | 1        |  | 12,000   | t                        |
|  |  |              |                          |  | -   | <b>-</b> -     | ence )   | -              | -                      |          |  |  | Ī                        |
|  |  |              |                          |  |   | ř.             |  |                |                        |          |  | <u> </u>   | 1                        |
|  |  |              |                          |  |   | 2              | 5.   | 25             | <del>]</del> -         | -        | <del> </del>                                     |  | +                        |
| 14,111,11  |  |              |                          | <del>                                     </del> | -   | Ξ.             |  | =              | 1                      | t        | -  | <del>                                     </del> | t                        |
|  |  |              | <b></b>                  |  | <b>-</b>                                      | ·              |  | =              | 1                      |          |  |  | I                        |
|  | \  |              |                          |  |   |                |  | -              |                        | 1_       | ļ  | ļ  | 1                        |
|  | <u>ال</u>  |              |                          |  | 1   | 3              | a ·  | 30             |                        | +-       |  | بسينه  | 1                        |
| <del>- 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, </del> | <del>                                     </del> | سبينا        | 1                        | ļ  | -   |                |  | - <del> </del> | -                      | +        |  | <del>                                     </del> | +                        |
| *.***. <u></u>                                       |  | -            |                          |  |   | =              |  | -              |                        | 1        |  |  | Ī                        |
| .स.ट्  |  |              |                          |  |   |                | · :  | ų.             |                        |          |  |  | 1                        |
|  |  |              |                          |  |   | 3              | 5  | .35            | <del> </del>           | 1        |  | <u> </u>   | +                        |
| 10.10  | 5.11<br>2011 - 111                               |              |                          | -  | -   | _              | €.0.8. 35  | -              | 1                      | 1        |  |  | +                        |
|  |  |              | <del> </del>             | -  | 1-  | =              | SURTE- 35-25'  |                | 1                      | 1        | †  |  | 1                        |
|  |  |              |                          |  |   | -              | RISER 95- FLUSH  | ***            | 1                      | L        |  |  | I                        |
|  |  |              |                          |  |   | 4<br>4         | · O FILTER 34'- 27'  | 40             | <del> </del>           | 1        | ļ  | <del> </del>                                     | 4                        |
|  |  |              | <b> </b>                 |  | -   | <u>*</u>       | O FINE 22'   | ب<br>نه<br>ش   | <u> </u>               | +-       | <del> </del>                                     | -  | +                        |
| ***************************************              |  | <del> </del> |                          | <del> </del>                                     | -   |                | SCREEN 35'-25'  RISER 35'-25'  RISER 35'-23'  FINE 23'-2'  CHIPS 21'-1'  OF FLUSH WONDS  O CAUCETE   | 1              | +                      | +        | <del> </del>                                     | 1-   | †                        |
| <del></del>  |  |              | -                        | <del>                                     </del> | 1   | =              | D albeit some  | #<br>#3        |                        | T        |  |  | 1                        |
| 1.12   |  |              | 1                        |  |   |                | 6 Palente  | 45             |                        | L        |  | 1  | 1                        |
|  |  |              |                          |  |   |                | · CIVULETE   |                |                        | ļ.,      | <del> </del>                                     | 1  | 4                        |
|  | 1  | F .          | 1                        | 1  | 1   |                |  | بند.           | 1                      | 1        | <u>.l</u>  | 1  | L                        |

| TOUG                                    | TOU                        | MICCO                                   | AICIAI       |                    |              |              | , INC. FIELD BORING LOG                        |                               | No.                    |          |  |                  | _        |
|---|----------------------------|---|--------------|--------------------|--------------|--------------|--|-------------------------------|------------------------|----------|--|------------------|----------|
|   | ALB<br>TION _              |   |              |                    |              |              | ELEV.  |                               | ing N                  |          |  |                  |          |
| *****                                   |                            |   | hile drill   |                    | ير           | <u> </u>     | Time after drilling                            | <u> </u>                      |                        | ** **    | art 🗷  | 1 (S. 1) T. S. 2 | 11       |
|   | OUN                        | ט פ                                     | fore cas     |                    | mova         | al           | Depth to water                                 |                               |                        | Ür       | iit 🖘  | 130              |          |
| YV                                      | ATER                       |   | ter casin    |                    |              |              | Depth to cave-in                               |                               | المناسب                | Ct       | ilet 🔏   | 11-1             | $E_{i}$  |
| 6                                       | 9 /                        | Blow<br>San                             | s on         | چ.                 | \$           |              | Casing/Pro                                     | be                            | D _                    | g        | Blow   | rs on            |          |
| Sample<br>No.                           | Molgiure                   |   | <b>40.00</b> | Sample<br>Recovery | al Brows     |              | VISUAL FIELD CLASSIFICATION AND REMARKS Weight |                               | Unconfined<br>Strength | Boulders | 8  |                  | Dulling  |
| 07                                      | - 3                        | 0/6                                     | 6/12         | တည                 | Total        |              | Drop   | ii: :<br><del>''. !!' :</del> | 50                     | 品        | Casing<br>Size   | Probe<br>Size    | 0.2      |
|   |                            |   |              |                    |              |              | BUND DRILL 41/4 HEA TO 34                      | V =                           |                        |          | 424  | u 47             | Z/s      |
|   |                            |   |              |                    |              |              | Bund Delle 94 HEA TO 34                        | Ξ                             |                        |          | 69.<br>Granda (19. 19. 19. 19. 19. 19. 19. 19. 19. 19. | :<br>            |          |
|   | <u> </u>                   |   |              |                    |              | المنت        |  |                               |                        |          |  | استنتا           | 1/2      |
|   |                            | -                                       |              |                    |              | <u>-</u>     |  | =                             |                        | - 3      | **************************************                 |                  | U.       |
| :- in                                   |                            |   |              |                    |              | 5            | $\bigvee$                                      | 5.                            |                        |          |  |                  |          |
|   |                            |   |              |                    |              |              | •  | =                             |                        |          |  |                  | _        |
|   |                            |   |              |                    |              | <del>-</del> |  |                               | <u> </u>               | -        | انسينا   | <b></b>          |          |
|   |                            |   |              | 1111               |              |              |  | <u></u>                       |                        |          |  |                  | -        |
|   | 100.10<br>100.00<br>100.00 |   |              |                    |              | 10           |  | 10                            |                        |          | <del>- 4. 1</del>                                      |                  |          |
|   |                            | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |              |                    |              | <u> </u>     | *<br>*   | =                             | <b> </b>               |          |  |                  |          |
| 44.5                                    |                            |   |              |                    |              | <del></del>  |  | =                             | 1                      | $\vdash$ | ļ  | ļ <sup>!</sup>   | -        |
|   |                            |   |              |                    | <del>,</del> |              |  |                               | -                      |          |  |                  |          |
|   |                            |   |              |                    |              | 15           | r e  | 15                            |                        |          |  | 9                |          |
|   |                            |   |              |                    |              | _            |  | -                             | <b> </b>               | <u> </u> |  |                  |          |
|   |                            |   |              |                    |              | Ε            |  | -                             |                        | -        |  | i                | ┢        |
|   |                            | 81                                      |              | -                  |              |              |  | ت<br>نب<br>نب                 |                        |          |  |                  |          |
|   |                            | 95/111.7<br>\$1.000                     |              |                    |              | 20           | · · · · · · · · · · · · · · · · · · ·          | 20                            |                        |          | 1177   |                  |          |
|   |                            |   |              |                    |              | =            |  |                               |                        | -        | 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                | li i             | -        |
| 4                                       | -27                        |   | , Çra        |                    | Н            |              |  | =                             | 1-                     |          | <del> </del>   |                  |          |
|   |                            |   |              |                    |              |              |  | 25                            |                        |          |  |                  | 11111    |
|   |                            |   |              |                    |              | =            |  |                               | <del> </del>           | <u> </u> | L  | ļ                | $\vdash$ |
|   |                            |   |              |                    |              |              |  | Ī                             | }                      |          | <del> </del>   | <u> </u>         | ╢        |
| -                                       |                            | dari yar<br>Marita                      |              | -                  | -            | _            |  | بية<br>نم<br>ند               |                        |          | * :  |                  |          |
| 10,348                                  |                            |   |              |                    |              | <u> </u>     |  | 30                            |                        |          |  |                  | ļ.,      |
|   |                            |   |              |                    |              | = ~          |  | = =                           |                        | 1-       | F  |                  | +        |
|   |                            |   |              | -                  | -            | E            |  | Ξ                             | 1                      | -        |  | <b>!</b>         |          |
|   |                            |   |              | <b>[</b>           |              |              |  | •                             |                        |          |  |                  |          |
| ******                                  |                            |   |              |                    |              |              | €.0.8. 341                                     | 35 —                          | 1                      | Ļ        |  | <del> </del>     |          |
|   |                            |   | ļ            | -                  |              | <b>-</b> "   | SUREEN 34"-04"                                 | -                             | ]                      | -        | 1  | +                | -        |
|   |                            |   | ļ            | -                  |              | Ξ            | TEISER gy - FLUSH                              | 4                             | 1                      | +        | <del> </del>   | 1                | 1        |
| 1. 1.                                   |                            | ****                                    | <b> </b>     | 1                  |              | =            | BF1150 31'-22'                                 | -<br>-<br>-<br>               | 1                      |          |  |                  |          |
|   |                            |   |              |                    |              | _ «          | OFINE 22'- 20'                                 | 40                            | 1                      | 1        | <u> </u>   |                  | 4        |
| 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                            |   |              |                    |              | -            | CHIPS 20-1"                                    | ~                             | 1                      | ╁╴       | 1  | -                | 1        |
|   | 1                          |   | -            | esy La             |              | =            | O CONCACTE                                     | Ξ.                            | 1                      | T        |  |                  |          |
| 1161                                    |                            |   |              | L                  |              | E            | O FLUSH MOUNT                                  | =                             |                        |          |  |                  | $\bot$   |
|   |                            |   |              |                    |              | E 49         | 1  | 45                            | 1                      | ļ.,      | 4  |                  | 4        |
| <del></del>                             |                            |   | ļi           | 1_                 |              | Ξ            |  | -                             | }                      | 1        | 1  | +                | +        |
|   | <del> </del>               |   |              | -                  | 76           |              |  | -                             | 1                      | T        |  | 1                | I        |
|   |                            |   |              |                    |              |              |  |                               |                        |          |  |                  | -        |

| TOUC                                    | HTON,        | WISCO    | NISIN<br>V KI       | Ø                  |              |            |                            |                         |   | D BORII                 |                   |                       | dob  | No.                    | 5        | 020            | <b>t</b>      |                    |
|---|--------------|----------|---------------------|--------------------|--------------|------------|----------------------------|-------------------------|---|-------------------------|-------------------|-----------------------|--|------------------------|----------|----------------|---------------|--------------------|
| * |              |          | DIZOX               |                    |              | - ::       |                            |                         | EI                                      | .EV.                    |                   |                       | Bor  | ing N                  | ο        | ٩              | :<br>تابخونه  | محمد جنب           |
| **********                              | OUN          | n Y      | thile drill         | ing:               | ئىيىت        |            |                            |                         | ne after drillin                        |                         |                   | * ***                 | 1,   |                        | Sta      |                | 260           |                    |
|   | ATER         | <b>;</b> | efore cas           |                    |              |            |                            |                         | pth to water<br>pth to cave-in          | :                       |                   |                       | <u></u>  | ا : نست                |          |                | 12            |                    |
|   |              | Blo      | iter casir<br>vs on |                    |              | 7          |                            | De                      | has to case at                          |                         | T <sub>e</sub> -  | sing/Probe            |  |                        |          | Blow           |               | <del></del>        |
| Sample<br>No.                           | Moisture     | Sau      | npler               | Semple<br>Recovery | Total Blows  |            | VISUAL FI                  | ELD CLASSI              | FICATION AN                             | ID REMARKS              | g 1 <b>1</b> 41.4 | ight                  |  | Unconlined<br>Strength | Boulders |                |               | Drilling<br>Method |
| ď                                       | ž            | 0/6      | 6/12                | S.F                | Tota         |            |                            |                         |   |                         | Dro               | an so                 | 1, 1, 2, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, | Str                    | Bol      | Casing<br>Size | Probe<br>Size | ōž<br>, l , l      |
| ب جد                                    |              |          |                     |                    |              |            | BUND                       | · Doug                  | 10/2                                    | uch as                  | 28                |                       |  |                        |          |                |               | HT                 |
|   |              | J-1475,7 |                     |                    | 1            |            | X)C0 13                    | WELLE                   | · • • • • • • • • • • • • • • • • • • • | Flore De                |                   |                       | <u> </u>   |                        | -        |                |               | 1                  |
|   |              | - A - 17 | -                   |                    |              |            |                            |                         | F                                       |                         |                   | Terfue<br>Termination |  |                        |          |                |               | 1/                 |
|   |              |          |                     |                    |              | E.         | <b>ś</b> .                 | . 1                     | 1                                       |                         |                   |                       | 5  |                        | П        |                |               | V                  |
|   |              | ļ        |                     |                    |              | Ξ          |                            |                         | A                                       |                         |                   |                       | ===  | }                      | $\vdash$ | :              |               |                    |
|   |              |          |                     |                    | 200          | =          | -                          |                         |   |                         |                   |                       | <u>ئن</u><br>ئند                                   |                        |          |                |               |                    |
| چيندست.<br>خاندنس                       |              |          |                     |                    |              | E          |                            | -                       |   |                         |                   |                       | 1  |                        |          |                |               |                    |
| ·                                       |              |          |                     |                    |              |            | 10                         |                         |   |                         |                   |                       | 10   |                        |          |                |               |                    |
|   |              |          |                     |                    |              | E          |                            |                         |   |                         |                   |                       | 1, <del>-11,-</del>                                |                        |          |                |               |                    |
|   |              |          |                     |                    |              | =          |                            |                         |   |                         |                   |                       |  | <u> </u>               |          |                |               |                    |
|   | <del> </del> |          |                     | -                  |              | E          |                            |                         |   |                         |                   |                       | 15.  |                        |          |                |               |                    |
|   |              |          |                     |                    |              | E          | 15                         |                         |   |                         | :-                |                       | ,15 <del></del>                                    |                        |          |                |               |                    |
|   |              |          | <b> </b>            | <b> </b>           | _            | Ε          |                            |                         |   |                         |                   |                       | <b>I</b>   | -                      | -        |                |               |                    |
|   |              |          | 1-                  | 1                  | -            |            |                            |                         |   |                         |                   |                       | Ξ  |                        |          |                |               |                    |
|   |              |          |                     |                    |              | E.         | 20                         |                         |   |                         |                   |                       | 20   | 1                      |          |                |               |                    |
|   |              | -        |                     |                    | -            | E          | <b>74</b>                  | ii ii                   |   |                         |                   |                       | =  | }                      |          |                |               |                    |
|   |              |          |                     |                    | 1            | E          | ***                        | ini i<br>Lini           |   |                         |                   |                       | -  |                        |          |                |               |                    |
|   |              |          |                     |                    |              | <u> </u>   |                            |                         | #                                       |                         |                   |                       | حد:<br>نمو:<br>نمو:                                | <b>]</b>               | -        |                |               | -                  |
|   |              |          | 1                   | $\vdash$           |              | F          | 25                         | 77                      |   |                         |                   |                       | 25   |                        |          |                |               |                    |
|   |              |          |                     |                    |              | E          | • ;                        |                         | •                                       |                         |                   | -                     | ند.<br>ند.<br>حصر                                  |                        |          |                |               |                    |
| ()<br>() / ()                           |              |          |                     | 1                  | -            | E-         |                            | :<br>والأنصرسية بواليده | 220 75-                                 | ب ندوون                 |                   | المديد ال             | <u>ب.</u><br>دو شمون<br>تعرن                       | 7                      | U        |                |               | 20                 |
|   |              | gwr wi   |                     |                    | -            | <u> </u>   | <i>9</i> 1                 |                         | China man                               | 135°                    | my g              | 28                    | 30.  | 8                      | 1        |                | ranca.        | 12.2               |
| *                                       |              |          |                     |                    |              | E          | 30                         | tech                    | من همين                                 | ాం                      | T. Fin            |                       | -  |                        | 1        |                |               |                    |
| 4                                       |              |          |                     | 1                  | -            | E          |                            |                         | 16                                      |                         |                   |                       | = =  | ]                      | -        |                |               |                    |
| T::K                                    |              | -        | ***                 | T                  |              | F          | ř                          |                         | γ                                       |                         |                   |                       |  |                        |          |                | ļ.,,          |                    |
|   |              |          |                     |                    |              | E.         | 35 ــــــ                  |                         |   |                         |                   | <b>س</b> ې            | _35 <del></del>                                    | 1                      | -        |                | <u> </u>      | 1760               |
|   | -            | -        | 1                   | -                  | -            | Ξ          | A                          | OVENC                   | 20 6                                    | 4 Aug                   | ues 7             | 0 3                   | 7 🗸 🖫  | 1                      | 1        | -              | /             | 7 04               |
|   | 1            |          | 1 -                 | 1                  | T            | <b>t</b> - |                            | W 7 7 CH4               | (A) 1811                                | CK TO                   | العن دروند ا      | سدوح                  | - سب<br>س ر ر ر ر ر ر ر ر ر ر ر ر ر ر ر ر ر ر ر    |                        |          |                |               | Ac                 |
|   |              |          |                     | Γ                  |              | E          | <b>.</b>                   |                         | 5 %                                     | PURCE.                  | BIT               | 1 500/1               | 7104 -   |                        | +        |                | <b> </b>      | 175-2              |
|   |              | 100      |                     | 1                  | ┝            | Ε          | 40                         |                         |   |                         | 45 F 5.           | 1                     | 40   |                        | 1        |                |               |                    |
|   |              |          |                     | 1                  |              | Ξ          |                            | · .                     | 1/2                                     |                         |                   |                       | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\             |                        |          |                | 1             |                    |
|   |              |          |                     | 1.                 |              | E          |                            |                         | V                                       |                         |                   |                       |  | <b>]</b>               | 1-       | -              | 1             | 1                  |
|   |              | 1        | <b> </b>            | +                  |              | E          | 200 - 1864<br>1983<br>1984 |                         |   | 50250                   | 49-44             | 1                     |  | -                      | 1-       |                |               |                    |
|   | 1            | ¥        |                     | +                  | 1            |            | 45                         | The section             | المنصر الد                              | RISER.                  | 44 - A            | UHH                   | 45   |                        | Ι        |                |               |                    |
|   |              |          |                     |                    |              | E          |                            |                         | $\mathfrak{Z}$                          | FILTER<br>FINE<br>CHIPS | 49'-4             | ∍′                    | -  | 1                      | 1        |                |               |                    |
| ii iii<br><del>Strices</del> a          |              | <b> </b> |                     | -                  | 1618<br>1818 | E          |                            |                         | (40)                                    | CHILD                   | 40-40             | <b>V</b>              | :  | <del>]</del>           | +        | 1              | 1             |                    |
|   | 1            | 1        | 1                   | +                  |              | Ε-         |                            | E.O.                    |   | , ,                     | 0 co              | CRETT                 |  | 4                      |          | 1              |               |                    |

| BAD)                       | (14 - A  |  | True during     |                    |          |            | 200.000.000.000.000                      | 1.1111   | FIELD !              | BORING                                   | LUU                   | 1                                       | lob               | t<br>No                |             |  | Of   | <del></del>        |
|----------------------------|--|--|-----------------|--------------------|----------|------------|--|--|----------------------|--|-----------------------|---|-------------------|------------------------|-------------|--|--|--------------------|
|                            | 20 20 1  | on eres  | ONSIN<br>ON K   |                    | >        | <u></u>    |  |  |                      | <del></del>                              |                       |   | a i               |                        |             |  |  | ئارىم              |
| OCAT                       | non _  |  | 10130A          |                    |          |            |  |  | ELEV                 | <del></del>                              |                       |   | pon               | ng No                  |             |  | - p 7  | 21                 |
| GR                         | OUN  |  | Viville drill   |                    |          |            |  |  | iter drilling        | ·  | <del></del>           | <del></del>                             |                   | <b>- 1</b>             | Sta         | η <u>Ζ</u>                                       | - <del>/ /</del><br>/26                          | <i>- 41</i> -      |
|                            | ATER   | , L  | lefore cas      |                    |          | 2713       | er er er er er er er er er er er er er e | . 1.21 1 1                                     | o water<br>o cave-in | 21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | <del>- 11-411  </del> | <del></del>                             | <del>H dire</del> |                        | Chi         | et di  | . بر ،   | [بير-              |
| <del>188</del>             |  | A iii ye   | úter casir      | -                  |          | فجتنا      |  | Ферин  | O CAVO III           | A PART OF THE                            |                       |   |                   |                        | - 1         | Blow   | , 32° = 30, 1300                                 |                    |
| 8                          | Khoisture  | Sai  | urblet<br>we ou | Sample<br>Recovery | 8        |            | ASHAL FIFI I                             | CLASSIFICA                                     | TION AND R           | EMARKS                                   | Casing/               | 11                                      |                   | Unconfined<br>Strength | Boulders    | 7  | 1  | <u>2</u> 2         |
| Sample<br>No.              | Slot   |  |                 | 28<br>200          | 3        |            |  | 3.77   | dination and the     |  | Weight                |   |                   | Stren                  | ğ           | Ē.   | g  | Drilling<br>Method |
| -                          | 77   | 0/6  | 6/12            |                    | ٤        |            | :<br>:<br>                               | 127<br>20 - 20 - 20 - 20 - 20 - 20 - 20 - 20 - |                      |  | Drop _                |   |                   | ວັ"                    | . : : : : * | Gesing<br>Size                                   | Probe<br>Size                                    | i , , ,            |
| TOTAL TOTAL                |  |  |                 |                    |          |            | BLIND                                    | DRUL   | los the              | A 10                                     |                       | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | =                 |                        |             | 64   |  | J457               |
|                            |  |  |                 |                    |          |            | eren a rancon                            |  |                      |  |                       |   |                   |                        |             |  |  |                    |
|                            |  |  |                 |                    |          | E          |  | 16   |                      |  |                       |   | -                 |                        |             |  | -  | -                  |
|                            |  |  | <b>!</b>        |                    |          |            |  | Ą  |                      |  |                       |   | $\exists$         |                        |             |  |  |                    |
|                            |  | <del></del>                                      | -               |                    |          | 5          |  | •  |                      |  |                       |   | 5                 | 90.75                  |             | · · · · · · · · · · · · · · · · · · ·            |  |                    |
|                            | <del></del>                                      | -  |                 |                    |          | -          |  |  |                      |  |                       |   | 7                 | 307.00                 | 45.5        |  |  |                    |
|                            |  | 1 X X X X X X X X X X X X X X X X X X X          |                 |                    |          | Ē          |  |  |                      |  |                       |   | $\equiv$          |                        |             |  |  |                    |
|                            |  |  |                 |                    |          | E          |  |  |                      |  |                       |   | $\exists$         |                        |             |  |  | <u> </u>           |
| Gelogia.                   |  |  | 1               |                    |          | 10         |  |  |                      |  |                       | 1                                       | 10                |                        |             |  |  | <b></b>            |
|                            |  |  | 1               | _                  |          |            |  |  |                      |  |                       |   | =                 |                        |             | <u> </u>   | <u> </u>   | <del> </del>       |
|                            | ļ  | <b> </b>   |                 | -                  | 1        | Ε          |  |  |                      |  |                       |   | $\exists$         | ;                      |             |  |  | i i                |
|                            |  | <del> </del>                                     | 1               | <del> </del>       | -        |            |  |  |                      |  |                       |   | =                 |                        |             |  |  |                    |
|                            |  | -  | 1               | $\vdash$           | 1        |            |  |  |                      |  |                       |   | ຸ ≓               |                        |             | <del>بنده پیدت</del><br>ارسیاست                  |  |                    |
|                            |  | No.  |                 | S.E.               |          | 15         |  |  |                      |  |                       | 1                                       | 15                |                        |             |  |  |                    |
|                            | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1            | 100 100 100 100 100 100 100 100 100 100          |                 |                    |          | E          |  |  | ٠.                   |  |                       |   |                   |                        |             |  | <u> </u>   | <u> </u>           |
|                            | 15.18.40<br>1.00.11.00<br>1.00.11.00             |  |                 |                    | L        | <u> </u> = |  |  |                      |  |                       |   | =                 |                        |             |  | ļ  | ┼                  |
|                            |  |  | [               | ļ                  | _        | =          |  |  |                      |  |                       |   |                   |                        | -           |  | <del>                                     </del> | <del> </del>       |
|                            |  |  | <u> </u>        |                    | 1        | 20         |  |  |                      |  |                       | ŧ                                       | 20 —              | ii.                    |             |  | <del>                                     </del> | <b>T</b>           |
|                            |  | 1  | +               | 1                  |          | E          | 194                                      |  |                      |  |                       |   | =                 | <del> </del>           |             |  |  |                    |
|                            |  | <del>                                     </del> | 100             | 1                  | 1        | 1          | er-                                      |  |                      |  |                       |   | -                 |                        |             |  |  |                    |
|                            |  |  |                 | 1                  | 1        |            |  |  |                      |  |                       |   | $\exists$         | ئىسىدىن                |             | بببت   | ļ <u>.</u>                                       | <u> </u>           |
|                            |  |  |                 |                    |          | 25         |  |  |                      |  |                       | :                                       | 25                |                        |             | <del>(                                    </del> |  | -                  |
| BBI I                      |  |  |                 |                    |          |            |  |  |                      |  |                       | ٠                                       | I                 |                        | ļ.,,        |  | ļ  | -                  |
| . (18)<br><del>3.41.</del> |  | 1  | 1               | 1                  | <b>!</b> | <u> </u>   |  | -  |                      |  |                       |   |                   |                        | -           |  |  | 1                  |
|                            |  |  |                 | 1-                 | 1        |            |  |  |                      |  |                       |   |                   | <del></del>            |             |  | 1  | †                  |
| 11,11                      |  |  | 1               | $\vdash$           | 1-       | Ι.         |  |  |                      |  |                       |   |                   |                        |             |  |  |                    |
| erreni                     | 1 A  | <b>F</b>   | 1               | -                  | 1        | 30         |  |  |                      |  |                       | 4                                       | 30                |                        |             |  |  |                    |
| ·····                      | <b></b>  |  |                 | 1                  |          | F          |  |  |                      |  |                       |   | . 3               |                        |             |  | 1  |                    |
|                            |  |  |                 |                    |          |            |  |  |                      |  |                       |   | <u> </u>          |                        |             | ļ  | <b></b>  | -                  |
| in Cir.                    |  |  |                 |                    |          | E          |  |  |                      |  |                       |   | _                 | <b> </b>               | 1-          | . :  | 1  | 1                  |
|                            |  |  |                 |                    | _        | 35         | r,                                       |  |                      |  |                       |   | 35                | -                      | <b>}</b>    |  | +  | +-                 |
| :<br>                      |  |  |                 | 4                  | -        | <b> </b>   |  |  |                      |  |                       |   | Ξ                 | <del> </del>           | -           |  | 4  | 1                  |
|                            | <b> </b>   | المتناط  | -               | 1-                 | 1-       |            | Aucer                                    | TREE USA                                       | 37'                  |  |                       |   | <u> </u>          | -                      | 1           |  | -  | 21                 |
| <u>ئىيىت تىت</u>           |  | 1 1000<br>1 189                                  | 1               | -                  | +        |            |  | Swr  | rche to              | AIR TE                                   | many .                | 57                                      | es-               |                        |             |  |  | R                  |
| <u></u>                    | -  |  |                 | +                  | 1        | t          |  |  |                      |  | ,                     |   |                   |                        |             |  | 1  |                    |
|                            | 1  |  |                 |                    | 1        | 40         |  |  | ١.                   |  | •                     |   | 40 ==             |                        |             |  |  |                    |
| 1.7                        | <del>                                     </del> | 1  |                 |                    |          | E          |  |  | V                    |  |                       |   | Ξ                 |                        |             | ļ  | 1  | 1                  |
|                            |  |  |                 |                    |          | E          |  |  | . •                  |  |                       |   | -                 | <u> </u>               | 1_          | <u> </u>   | -  | -                  |
| TIT TIT                    |  |  |                 |                    |          |            |  |  |                      |  |                       |   | =                 | <del> </del>           | 1-          |  | +  | +-                 |
| eregio<br>AMO T            |  | I  |                 | 1_                 | 1_       | 45         |  |  |                      |  |                       |   | 45                | <del> </del>           | +           | 100  | +  | +                  |
|                            | <del> </del>                                     | 1  | 4-              | +                  | +-       | E          |  |  |                      | ٠.                                       |                       |   | , <u>=</u>        | <del> </del>           | 1           | <b> </b>   | 1  | 1:                 |
|                            | 1  | -  | 1-              | +-                 | 1        | E          |  |  |                      |  |                       |   | =                 | 1                      | 1           |  | 1  | 1                  |
| ·                          | 1  | +  |                 | 1                  | +        | 士          |  |  |                      |  |                       |   | Ξ                 |                        |             | 1  |  |                    |
|                            | 1  | 1  |                 | +-                 | +        | E          | dine                                     |  |                      |  | ***                   |   | 50                | 1                      | T           | 1  | 1  |                    |

|   | HTON,<br>MA                            |   |                   | r                  | <del></del>              |  |              | 1                                       |  |              | 622<br>10  |  |                  |
|---|--|---|-------------------|--------------------|--------------------------|--|--------------|---|--|--------------|--|--|------------------|
| OCAT                                    | TION _                                 | MAD                                       | seu               |                    |                          | ELEV.  | <u> </u>     | Bor                                     | ing N  | -            | _10  |  | Esperation .     |
| GR                                      | OUN                                    |   | hile drill        |                    |                          | Time after drilling  |              |   |  | St           |  | 27.  |                  |
|   | ATER                                   | B   | etore cas         |                    |                          |  | <del></del>  | <del>-,,,,,,</del>                      |  | Ur           | in <u>727-</u><br>iel                            | 10   | 11               |
| 3.7.                                    |  | - A                                       | ter casir         | g ren              | ioval                    | Depth to cave in   |              |   |  |              |  | *****  | E-13.            |
| <b>a</b>                                | 2                                      | Blow                                      | ablet<br>va ou    | چَو                | 8<br>8                   | The second secon | Casing/Probe |   | Uncontined<br>Strength                           | ω.           | Blow   | s on   |                  |
| Sample<br>No.                           | Molsture                               |   |                   | Sample<br>Recovery | Total Blows              | VISUAL FIELD CLASSIFICATION AND REMARKS  | Weight       |   | illoo  | 身            | 6  |  | Drilling         |
| 0                                       | 2                                      | 0/6                                       | 6/12              | N.E.               | ŏ                        | Stakes 0 50  | Drop         |   | รรร  | 8            | Casing<br>Size                                   | Probe<br>Size                                    | ΩΣ               |
|   |  | Participant<br>Seament III                |                   |                    | 77. 7                    | 919818 Ø 5U  |              |   |  | -            | ဝေ   | டிக  | 1                |
|   |  |   |                   |                    | 32 - 3<br>1 - 1<br>1 - 1 | <del></del>  |              |   |  |              |  |  | 1                |
|   |  |   |                   |                    |                          |  |              | Ξ                                       |  | 4:: .        |  |  |                  |
|   |  |   |                   |                    |                          | :  |              | _                                       |  |              |  |  | Y                |
| 111,111                                 | لننسخند                                | سننسبأ                                    |                   |                    |                          | 5,5  |              | 5                                       |  |              |  |  | <del> </del> -   |
|   |  |   |                   | -                  |                          |  |              | =                                       | إسبيد  | -            | أسنا   | <del> </del>                                     | <del> </del>     |
|   | · ·                                    |   |                   | -                  | -                        | ingi<br>I <del>ngi</del>   |              |   |  |              |  | <del></del>                                      | $\vdash$         |
| - 7                                     |  | <del></del>                               | -                 |                    |                          | <del></del>  |              | Ξ                                       |  |              |  |  |                  |
|   |  |   |                   |                    |                          |  |              | 10                                      |  |              |  |  |                  |
|   |  |   |                   |                    |                          | <u>्रा</u> ्राम् <mark>यू च.</mark><br>१९६१ - १९६१ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४ - १९६४   |              | _                                       |  |              | ببيب   |  |                  |
|   |  | ļ   | <del> </del>      | -                  | -                        | <del></del>  |              |   | <u> </u>   | -            |  |  | <del> </del>     |
|   | <del>iyya ka a</del>                   | تتستعير                                   | <del> </del>      | -                  | بببت                     |  |              |   |  | -            |  |  | 1                |
| · · · · ·                               |  | <del>2 (1)</del>                          |                   | <del>(2000)</del>  | *****                    |  |              |   |  | -            |  |  | 1                |
| 1177.11                                 |  |   |                   |                    |                          | 1825   |              | 15                                      |  |              |  |  |                  |
|   | in a                                   |   |                   |                    |                          |  | :            |   |  |              |  |  |                  |
|   |  |   |                   |                    |                          | <del>_</del>   |              |   |  |              |  | -  | ļ                |
|   |  |   |                   |                    |                          | E. 0. 5. 69'   | <del> </del> |   |  |              | -  |  | +                |
|   |  | :   |                   |                    |                          | 2070   |              | 20                                      |  |              | ***************************************          | Garage C   | 1-               |
|   |  | î.<br>Î                                   |                   |                    |                          | SCREEN GA'-64' RISER GH'-FWSH  | •            | 30                                      |  |              |  |  |                  |
|   |  |   |                   |                    |                          | RISER 64 - FUSH  |              | =                                       |  |              |  |  |                  |
|   |  | eriore.<br>Transition                     |                   |                    |                          | = 3 From 69'-62'   |              | Ξ                                       |  |              |  | بنسب   |                  |
|   | 17.77. II.                             |   |                   | _                  |                          | DFINE 102'-60'   |              | 25                                      | تحيشب  |              |  | 1<br>2   | ₩                |
|   |  |   |                   |                    | $\vdash$                 | = GENTHIPS 60'-1'  |              | _                                       |  |              |  | -  | <del> </del>     |
|   |  | -   |                   |                    |                          | E OCOLCRETE  |              | _                                       |  | -            | -  | <del>                                     </del> | 1                |
|   |  | :<br>: :::::::::::::::::::::::::::::::::: | -                 |                    | -                        | DELICH MUNOT  OF INST 102'-60'  OCOLOGIC  OF INST 102'-60'   |              |   |  |              |  |  |                  |
|   |  | سبمبيدي<br>ا                              |                   |                    |                          | <u> </u>   |              | 30                                      |  |              |  |  |                  |
| or entre                                | 8                                      |   |                   |                    |                          |  | •            | _                                       |  |              |  |  | 1                |
|   |  | والاحمشالية                               |                   | <u> </u>           |                          | <b>=</b> :   |              | Ę                                       | ļ  | -            | ļ  |  | -                |
| 11.00 T                                 |  |   | ~- <del>*</del> 6 | <u> </u>           | -                        | <del></del>  |              |   | <del> </del>                                     | <del> </del> | <del> </del>                                     | <del>                                     </del> | +                |
|   | ·                                      | ·   | -                 | -                  | -                        |  |              | ======================================= | <u> </u>   | 1            | <del>                                     </del> | <del> </del>                                     | 1                |
|   |  |   |                   |                    |                          | <b>**</b>  |              | 35                                      |  |              |  |  | 1 (5%)<br>1 (1 ) |
|   | ************************************** | 7 17 1                                    |                   | Г                  |                          |  |              |   |  |              |  |  |                  |
|   |  |   |                   |                    |                          |  |              | ٠٠, <u></u>                             |  |              |  | <u> </u>   |                  |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | * 2                                    |   |                   |                    |                          |  |              | =                                       | <u> </u>   | 1            | <u> </u>   | <b> </b>   | ┼                |
|   | <u> </u>                               | بننا                                      | <u> </u>          | -                  | _                        |  |              | 40                                      | <del>                                     </del> | 1            | <del> </del>                                     | -  | +                |
|   |  |   | <del> </del>      | -                  | -                        |  |              |   | <b></b>  | +-           | <del> </del>                                     | -  | 1                |
| <del></del> -                           | النصا                                  | -   | <del> </del>      | -                  |                          | E  |              |   |  | -            |  | <u> </u>   | 1                |
| <del></del>                             | -                                      | <u> </u>                                  | <del></del>       | -                  | *****                    |  |              | <del></del>                             | -  | <b>T</b>     | 1  |  |                  |
|   |  |   | <del> </del>      |                    | -                        | in the second se |              |   |  |              |  |  |                  |
|   |  |   |                   |                    |                          | <del></del>  |              | 45                                      |  |              |  |  |                  |
|   |  |   |                   |                    |                          | <u>E</u> .   |              | Ξ                                       |  | 1_           | ļ  | <u> </u>   | 1                |
|   |  |   |                   |                    |                          |  |              | ==                                      | 1  | -            | <b></b>  | -  | -                |
|   | 1:                                     |   |                   | L                  |                          |  |              | . 🙃                                     | 1  | 1_           | ــــــ   | 1  | 4-               |

| State of Wisconsin              |
|---------------------------------|
| Department of Natural Resources |

## Soil Boring Log Information Form 4400-122 Rev. 7-98

|                    |                                |              | j                              | Route to: Watershed/Wa<br>Remediation/F   | astewater 🔲<br>Redevelopment 🛛   |                        |                          | ement [              | ]                    |                  |                         |                     | ,               |                  |               |                  |
|--------------------|--------------------------------|--------------|--------------------------------|---|--|------------------------|--------------------------|----------------------|----------------------|------------------|-------------------------|---------------------|-----------------|------------------|---------------|------------------|
|                    |                                |              |                                |   |  |                        |                          |                      |                      |                  |                         |                     | ı               | Page             | 1             | of <u>2</u>      |
| Facility/          | Project N                      |              | Kipp                           | /WI001283.0001.00   | 0004   | Licen                  | ise/Peri                 | mit/Mon              | itoring N            | lumber           | -                       | В                   |                 | lumber           |               |                  |
| Boring [           |                                |              |                                | chief (first, last) and Firm  |  | Date                   | Drilling                 | Started              |                      | Date [           | Orilling C              | omple               | ted             | Drilling         | g Met         | hod              |
| First Na           | <sub>me</sub> Ry<br>Giles É    | /an<br>ngine | erino                          | Last Name Fett<br>a. Inc.   |  |                        | 04/0                     | 4/12                 |                      | 0                | 4/04/                   | 12                  |                 |                  | ollov<br>iger | w Stem           |
| WI Unio            | ue Well                        | Vo.          |                                |   | Well Name  | Fina                   | l Static                 | Water Le             | evel                 | Surfac           | e Elevati               | on                  |                 | Boreh            | ole D         | iameter          |
| OY!                | 905<br>rid Origin              |              | estima                         | ted:  ) or Boring Location  | MW-10S   |                        |                          | Fee                  | t                    | Local G          | rid Loca                |                     | t MSL           | _2               |               | inches           |
| State P            | lane4                          | 0004         | 7.9                            | ted: (1) or Boring Location N, 2143831.5  |  |                        | t                        |                      |                      |                  |                         |                     | N               |                  |               | E                |
| Fa ailia.          | 1/4 of                         |              | 1/4 of                         | Section,T<br>unty   | N,R  | E Long                 |                          | C1 117               | (151)                |                  |                         | et 🗆                | s <u> </u>      |                  |               | Feet W           |
| Facility<br>11     | 31253                          |              |                                | Dane  |  | Code<br>3              |                          | Civil Tow            | Mad                  |                  |                         |                     |                 |                  | T.            |                  |
| Sam                | ple                            |              |                                |   |  |                        |                          |                      |                      |                  |                         | Soil F              | rope            | rties            |               |                  |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts  | Depth in Feet                  | Soil/Rock D<br>And Geolo<br>Each Major  | gic Origin For   |                        | USCS                     | Graphic<br>Log       | Well<br>Diagram      | PIDÆID           | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200         | RQD/<br>Comments |
| 1                  | 21.6                           | 221          | 0                              | 0-2.0'/ 0.0-0.2' Asphalt. 0.2-1.5' Fill: Asphalt, moi 1.5-1.8' Clay: Dark yellov little silt, trace organics, v plasticity, soft (HP = 1,5),  | wish brown (10 YI<br>well sorted, medi                                     | R 4/6),                |                          | 0                    | > 0                  | 0.0              | 2                       | 20                  |                 | P                | <u>a.</u>     | ~~               |
| 2                  | 19.2                           | 2244         | - 2<br>-<br>-<br>-             | 2.0-4.0'/<br>0.0-1.6' Clay: Same as abo<br>Note: Firmer (HP = 2.5).   | ove.   |                        |                          |                      |                      | 0.0              | *                       | **                  |                 |                  |               |                  |
| 3                  | 24                             | 2233         | -                              | 4.0-6.0'/<br>0.0-2.0' Clay: Same as ab<br>Note: Little sand, subang<br>fine to fine grained, wet  | gular to subround  | ded, very              |                          |                      |                      | 0.0              |                         |                     |                 |                  |               |                  |
| 4                  | 18                             | 222          | - 6<br>-<br>-<br>-<br>-<br>- 8 | 6.0-8.0'<br>0.0-1.5' Sand: Some silt,<br>YR 4/4), trace organics, tr<br>fine to fine grained, suba<br>well sorted, no plasticity,<br>indurated, very soft (HP:<br>Note: No odor, wet seam | race pyrite, sand i<br>angular to subrou<br>r, loose and poorly<br>= 2.5). | is very<br>unded,<br>y |                          |                      |                      | 0.0              |                         |                     |                 |                  |               |                  |
| 5                  | 19.2                           | 1343         |                                | 1.5" in diameter at 1.5". 8.0-10.0' 0-1.6' Sand: Same as about Note: Trace gravel throu 1/4", subangular to subrouchange to yellowish brouds.   | ighout, 1/4-1/8", n<br>ounded, loose, col                                  |                        |                          |                      |                      | 0.0              |                         |                     |                 |                  |               | à                |
| 6                  | 18                             | 3464         | 10                             | 10.0-12.0'/<br>0.0-1.5' Silty Sand: Yellov  | wish brown (10 V   | R 5/8)                 |                          |                      |                      | 0.0              |                         |                     |                 |                  | $\neg$        |                  |
|                    |                                | that th      | e infoi                        | rmation on this form is tru   | ue and correct to  | the best o             |                          | knowled              | dge.                 |                  |                         |                     |                 |                  | 1             |                  |
| Signatu            | re                             | . حد         |                                | *   | FI   | 126                    | ADIS<br>N. Jefi<br>vauke | ferson :<br>e, WI (4 | St., Suit<br>414) 27 | te 400<br>'6-774 | 2                       |                     |                 |                  |               |                  |

**Boring Number** Soil Properties Sample Length All. & Recovered (in) Soil/Rock Description Depth in Feet Compressive Strength Blow Counts And Geologic Origin For Number and Type Well Diagram Moisture Content Graphic Log Each Major Unit Liquid Limit Plastic Limit P 200 50 percent silt, 50 percent sand, sand is very fine to fine grained, subangular to subrounded, trace gravel, 1/4" to 1/8", subangular to subrounded, trace organics, no plasticity, loose and poorly indurated, very soft (HP = 0.5), poorly sorted, moist, no odor. 7 16.8 4446 0.0 12-14'/ 0.0-1.4' Same as above. 8 21.6 1443 14-16'/ 0.0 0.0-1.8' Silty Sand: Same as above, wet at 1.2'. 9 16-18'/ 18 226 0.0 0.0-1.5' Silty Sand: Same as above. 18 Note: Very wet, trace to some gravel, 1/4" diameter, subangular to subrounded, fining upward progression with medium grained sand from 1.2-1.5'. 10 2.4 6 12 18-20'/ 0.0 20 26 0.0-0.2' Sand: Yellowish brown (10 YR 5/8), very fine to fine grained, subangular to subrounded, some silt to trace, some gravel, 1/4" to 1/8", mostly 1/4", nonplastic, loose, poorly sorted, moist to wet, no odor. 11 22.8 18 18 20-22'/ 0.0 21 15 0.0-1.9' Sand: Same as above. Note: No odor, last 6" sand grades to medium grained, subangular to subrounded. EOB @ 22' 24 26 28

MW-10S

|                    | Wisconsi<br>nent of N           |                        | source                | s  |                |              |                |                 |         |                         | oil Bc<br>m 440 |                 | Log              | Info           | rmation<br>Rev. 7-98     |
|--------------------|---------------------------------|------------------------|-----------------------|--|----------------|--------------|----------------|-----------------|---------|-------------------------|-----------------|-----------------|------------------|----------------|--------------------------|
|                    |                                 |                        | <u> </u>              | Route to: Watershed/Wastewater Remediation/Redevelopment                               | Waste<br>Other | Manage       | ement [        | ]               |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        |                       | memediation, near-relognment ==  | other          | ш_           |                |                 |         |                         |                 | ı               | Page _           | 1_             | of <u>3</u>              |
| Facility           | /Project N                      |                        |                       |  | Lice           | nse/Peri     | nit/Mon        | itoring N       | Number  |                         | В               |                 | lumbe            | r              |                          |
|                    |                                 |                        |                       | /WI001283.0001.00004   |                |              | - 1            |                 | 2       |                         |                 |                 |                  | 1W-            |                          |
|                    | ,                               |                        | of crew               | chief (first, last) and Firm   | Date           | Drilling     | Started        |                 | Date [  | Orilling C              | omple           | ted             | Drillin          |                | <sub>hod</sub><br>w Stem |
|                    | <sub>ame</sub> Ry<br>Giles É    |                        | erina                 | Last Name Fett   |                | 04/1         | 0/12           |                 | 0       | 4/10/                   | 12              |                 |                  | ıgei           |                          |
|                    | que Well                        |                        |                       | DNR Well ID No. Well Name  | Fina           | al Static    | Water Le       | evel            | Surfac  | e Elevatio              | on              |                 |                  |                | iameter                  |
| <u>OY</u>          | 906                             |                        |                       | MW-11S   |                |              | Fee            | t               |         |                         |                 | t MSL           | 8                |                | inches                   |
| Local G<br>State F | rid Origir<br>Plane 30          | ı <b>⊠</b> (0<br>99676 | estimat<br>. <b>7</b> | ted: ☐ ) or Boring Location ☐<br>N, E S ☐ /C ☐ /N                                      | N□I La         | et .         |                |                 | Local G | irid Loca               | tion            | l Ni            |                  |                | □E                       |
|                    | 1/4 of                          |                        |                       | Section,TN,R   | E<br>W Lon     |              |                |                 |         | Fe                      | et 🔲            |                 |                  |                | Feet W                   |
| Facility           | ID                              |                        | Co                    | unty County  | Code           |              | Civil Tow      | rr(/City)c      |         |                         |                 |                 |                  | _              | rece II w                |
| 11                 | 31253                           | 320                    |                       | Dane <u>1</u>  | 3              |              |                | Mad             | ison    |                         |                 |                 |                  |                |                          |
| San                | nple                            |                        |                       | U  |                |              |                |                 |         |                         | Soil F          | rope            | rties            |                |                          |
|                    | (ir)                            | S                      | et                    | Soil/Rock Description  |                |              |                |                 |         | ve                      |                 |                 |                  |                | ,                        |
| oe o               | All.                            | ount                   | in Fe                 | And Geologic Origin For  |                |              | U              | ء ا             |         | essi<br>th              | Ire<br>It       |                 | 1                |                | ents                     |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts            | Depth in Feet         | Each Major Unit  |                | USCS         | Graphic<br>Log | Well<br>Diagram | PIDÆ    | Compressive<br>Strength | oistu<br>nter   | Liquid<br>Limit | Plastic<br>Limit | 200            | RQD/<br>Comments         |
| a K                | -                               |                        | 0                     |  | _              | ) Š          | हुं द          | 3 5             | 1       | St. C                   | <u>ĕ</u> 0      | 흔힌              | 급급               | ۵              | <u>2</u> 0               |
| 1                  | 12                              | 3332                   | L°                    | 0-2.0'/<br>0.0-0.4'Topsoil.  |                |              |                |                 | 0.0     |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | F                     | 0.4-1.0' Clay: Some silt, well sorted, media   | um             |              |                |                 |         | 1                       |                 |                 |                  |                |                          |
|                    |                                 |                        | L                     | plasticity, medium stiff (HP = 2.5), moist, t  |                |              |                |                 |         |                         |                 |                 |                  |                |                          |
| - 1                |                                 |                        | L                     | organics, dark yellowish brown (10 YR 3/6)<br>Note: No odor.                           | 0).            |              |                |                 |         |                         |                 |                 |                  |                |                          |
|                    | 42.0                            |                        | -2                    | 2.0-4.0′/  |                | 1            |                |                 | 2.50    |                         |                 | ļ               |                  |                |                          |
| 2                  | 13.2                            | 2323                   | F                     | 0.0-1.1'Silty Clay: Trace sand, sand is very   | fine to        |              |                |                 | 2.50    |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | fine, subangular to subround, trace small  | pebbles,       |              |                |                 |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | F                     | 1/8-1/4" in size, subangular to subrounde medium plasticity, soft (HP = 1.5), poorly s |                |              |                |                 |         |                         |                 |                 |                  |                |                          |
| - 1                |                                 |                        | F                     | moist, dark yellowish brown (10 YR $4/6$ ).  | ortea,         |              |                |                 |         |                         |                 |                 |                  |                |                          |
| 3                  | 144                             | 2242                   | -4                    | Note: Trace organics and wood chips  | i              |              | -              |                 | 2 07    |                         |                 |                 |                  | H              |                          |
| 3                  | 14.4                            | 2243                   | F                     | approximately 1" in size.  |                |              |                |                 | 3.87    |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | 4.0-6.0'/<br>0.0-0.8' Silty Clay: Same as above.                                       |                |              |                |                 |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | Note: Silty sand seams approximately 1/2   | 2"in           |              |                |                 |         |                         |                 |                 |                  |                |                          |
| - 1                |                                 |                        | F                     | width at 0.6'.   | ماريم          |              |                |                 |         |                         |                 |                 |                  |                |                          |
| 4                  | 7.2                             | 7 17                   | -6                    | 0.8-1.2' Silty Sand: Sand is very fine to fin angular to subrounded, trace to some gra |                | <del> </del> |                | -               | 0.81    |                         |                 |                 |                  |                |                          |
|                    | 7.2                             | 21 12                  | -                     | 1/8-1/4" in size, mostly 1/8", subangular to   | sub-           |              |                |                 | 0.01    |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | F                     | rounded, trace organices and roots, poor<br>honplastic, loose, moist, yellowish brown  |                | ł            |                |                 |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | F                     | 5/8).  | (IUIK          |              |                |                 |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | Note: No odor.   |                |              |                |                 |         |                         |                 |                 |                  | - 10           |                          |
| 5                  | 15.6                            | 23 7 7                 | - 8                   | 6.0-8.0'<br>0.0-0.6' Silty Sand: Same as above.  |                | 1            |                |                 | 0.0     |                         |                 |                 |                  | $\vdash\vdash$ |                          |
| 2                  | 15.0                            | 6                      | F                     | Note: Large pebbles 1/2-1-1/2" in size, ar   | ngular.        |              |                |                 | 0.0     |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | 8.0-10.0′  |                |              |                |                 |         |                         |                 |                 |                  |                | -                        |
|                    |                                 |                        | -                     | 0-0.6' Silty Sand: Same as above.<br>0.6-1.3' Sand: Little to some silt, sand is v     | ory fine       |              |                |                 |         |                         |                 |                 |                  |                |                          |
|                    |                                 |                        | -                     | to fine grained, mostly very fine, trace to  |                |              |                |                 |         |                         |                 |                 |                  |                |                          |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

gravel, 1/4-1/2", mostly 1/4" in size, subangular to subrounded, dolomite, poorly sorted, yellowish

Signature

Firm ARCADIS

126 N. Jefferson St., Suite 400 Milwaukee, WI (414) 276-7742

| Sam                | nple                            |                |                     |   |      |                |                 |          |                         | Soil Pi             | operti          | es               |       |                  |
|--------------------|---------------------------------|----------------|---------------------|---|------|----------------|-----------------|----------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts    | Depth in Feet       | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | PID(FID) | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
| 7                  | 24                              | 7787           | 12<br>12            | brown (10 YR 5/8), non-plastic, loose, moist, Note: No odor, black and dark green staining throughout.  10-12'/ No recovery.  12-14'/ 0.0-2.0' Sand: Same as above. Note: Increasing silt percent, dolomite gravel increasing in size up to 3/4-1", mostly 3/4",    |      |                |                 | 0.0      |                         |                     |                 |                  |       | 4                |
| 8                  | 20.4                            | 7 9 17<br>12   | — 14<br>-<br>-      | angular.  14-16'/ 0.0-1.7' Silty Sand: Sand is subangular to sub- rounded, very fine to fine grained, some gravel, dolomite and chert, 1/4-1/2", mostly 1/4", angular and fractured, poorly sorted, yellowish brown (10 YR 5/6), nonplastic, loose, moist.          |      |                |                 | 0.0      |                         |                     |                 |                  |       |                  |
| 9                  | 24                              | 8 16<br>17 16  | 16<br><br><br>      | Note: No odor.  16-18'/ 0.0-2.0' Silty Sand: Same as above. Note: Dolomite gravel increasing in size to 1- 1-1/2", angular and fractured.   | Į#   |                |                 | 0.14     |                         | 2                   |                 |                  |       |                  |
| 10                 | 21.6                            | 16 39<br>31 50 | - 18<br>-<br>-<br>- | 18-20'/ 0.0-0.8' Silty Sand: Same as above. 0.8-1.8' Silty Sand: Same as above. mostly very fine, subangular to subrounded, some gravel, dolomite, 1/8-1", mostly 1/8-1/4", angular to subangular, poorly sorted, yellowish brown (10                               |      |                |                 | 3.73     |                         |                     | -               |                  |       |                  |
| 11                 | 18                              | 32 33<br>39 50 | - 20<br>-<br>-<br>- | YR 5/6), low plasticity to non-plasticity, loose and very soft (HP= 0.5), moist.  Note: No odor, dolomite gravel lens at 0.8-1.0', white weathering to outside of sediment and gravel  20-22'/  _0.0-1.5' Silty Sand: Same as above.                                |      |                |                 | 0.31     |                         |                     |                 |                  |       |                  |
| 12                 | 16.8                            | 32 37<br>50 50 | - 22<br>-<br>-      | Note: Dolomite gravel increasing to 1" to 1-1/2", angular.  22-24'/ 0.0-1.4' Silty Sand: Same as above. Note: Gravel lens at 1.2-1.4', sand lens at 0.8-0.9', subangular to subrounded, medium grained.   |      |                |                 | 4.45     |                         |                     |                 |                  |       |                  |
| 13                 | 20.4                            | 7 23<br>26 30  | - 24<br>-<br>-      | 24-26'/ 0.0-1.7' Sand: Some silt, sand is very fine to fine grained, mostly fine, subangular to subrounded, some gravel, dolomite, 1/8-1/4", mostly 1/4", angular and fractured, poorly sorted, yellowish brown (10 YR 5/6), low plasticity, soft (HP= 1.5), moist. |      |                |                 | 2.83     |                         |                     |                 |                  |       | 8                |
| 14                 | 18                              | 38 40<br>67 42 | - 26<br>-           | Note: No odor, white sandstone lens at 1.6-1.7', subangular to subrounded, fine grained, slow dilatancy, slightly wet.  26-28'/ 0.0-1.5' Silty Sand: Same as abaove. Note: Wet.   |      |                |                 | 13.38    |                         |                     |                 |                  |       |                  |
| 15                 | 24                              | 12 33<br>40 41 | - 28<br>-<br>-      | 28-30'/<br>0.0-2.0' Silty Sand: Same as above.<br>Note: Wet on outside of core, slow dilatancy, white   |      |                |                 | 22.91    |                         |                     |                 | .8.              |       |                  |

MW-11S **Boring Number** Sample Soil Properties Length All. & Recovered (in) Soil/Rock Description Depth in Feet Compressive Strength Blow Counts And Geologic Origin For Number and Type Well Diagram Moisture Content PID(FID) Graphic Ľog Each Major Unit Liquid Limit Plastic Limit P 200 sand lens at 0.2-0.3', subangular to subrounded, fine grained. 16 20.4 7 30 30-32′/ 17.68 42 40 0.0-1.7' Silty Sand: Same as above. Note: Orange and red staining throughout, wet. 17 32-34'/ 9.6 6 23 3.40 0.0-0.8' Silty Sand: Same as above. 20 50 Note: Wet, color change to yellowish brown and slightly gray (10 YR 5/4) 18 7 23 34-36'/ 19.2 7.47 39 50 0.0-1.6' Silty Sand: Sand is very fine to fine grained, mostly fine, subangular to subrounded, little gravel, dolomite, 1/4-1/2", mostly 1/4", angular to subangular, poorly sorted, light yellowish brown (10 YR 6/4), loose to low plasticity, soft (HP = 1.5), very wet. Note: No odor. EOB @ 36' - 38 40 44 46

| Facility/Project Name   Madison-Kipp/WI001283.0001.00004   |   |                         |           | 1          | Route to: Watershed/W<br>Remediation           |                                   |                               | aste M          |          | ement [   | ]          |           |            |        |       |        |     |        |
|--|---|-------------------------|-----------|------------|--|-----------------------------------|-------------------------------|-----------------|----------|-----------|------------|-----------|------------|--------|-------|--------|-----|--------|
| Solid Properties   Solid Prope   |   |                         |           |            |  | ,                                 |                               |                 |          |           |            |           |            |        |       | Page   | 1   | of 2   |
| Boing Diffield By Name of crew chief (first, last) and affirm    Sirst Name   Sirst | Facility/   |                         |           | Kipp       | /WI001283.0001.0                               | 0004                              |                               | Licens          | e/Peri   | mit/Mon   | itoring N  | lumber    |            | В      |       | lumbe  | r   |        |
| Will Unique Well   DNR   Well   | Boring D  |                         |           |            | chief (first, last) and Firm                   |                                   |                               | Date D          | Prilling | Started   |            | Date [    | Orilling C | omple  | ted   |        |     |        |
| Wilding   Wild   | First Na  | me Ry                   | yan       | orin       |  |                                   |                               | C               | )4/1     | 0/12      |            | O         | 4/10/      | 12     |       |        |     |        |
| Local Grid Location   Market   |   |                         |           | enne       |  | Well Name                         |                               | Final           | Static   | Water Le  | evel       | Surfac    | e Elevati  | on     |       |        |     |        |
| Sate   Pine   A00535.3   N   2144281.8   E   S   |   |                         |           |            |  | MW                                | 12S                           |                 |          | Fee       | t          |           |            |        | t MSL | _8_    |     | inches |
| The facility ID County Code    County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   County Code   | State P   | lane 4                  | 00535     | 3          | N. 21442818                                    | E S                               | /c□/n□                        | Lat             |          |           |            | Local G   | rid Loca   |        | ΙN    |        |     | ПΕ     |
| 13125320   Dane   13   Madison   Soil Properties   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   Soil/Rock Description   And Geologic Origin For Each Major Unit   And Geologic    |   | 1/4 of                  |           | 1/4 of     | Section,T                                      | <b>N</b> ,R                       | D E                           | Long            |          |           |            |           | Fe         |        |       |        |     |        |
| Soll/Rock Description And Geologic Origin For Each Mujor Unit    Soll/Rock Description   Soll/Rock Des |   |                         |           |            |  |                                   | County Code                   | 2               | 1        | Civil Tow | rr(/City)o | r Village | 2          |        |       |        |     |        |
| Solit/Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geologic Origin For Each Major Unit   Solit Rock Description   And Geolo   |   | -                       | 520       |            | Dane   |                                   | 13                            |                 |          |           | IVIAU      | 15011     | l          | Soil F | rone  | rties  |     |        |
| 1  | Jan   | ·                       |           |            | C. H.D d.                                      | D                                 |                               |                 |          |           |            |           |            | 0      | Горс  | lies   |     |        |
| 1  | , a   | And Geologic Origin For |           |            |  |                                   |                               |                 |          |           |            |           |            | ۵      |       |        |     | nts    |
| 1  | Each Wajor Onit S S S S S S S S S S S S S S S S S S S |                         |           |            |  |                                   |                               |                 |          |           |            |           | npre       | istur  | 를 ±   | it iti | 00  | nme    |
| 2  | Nur   |                         |           |            |  |                                   |                               |                 |          |           |            |           |            | 8 0    | Ligi  | Pla    | P 2 |        |
| 2 2.0-4.07  0.0-1.0°Clay: Little silt, moist, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor, orange and gray mottling.  4 4.0-6.0°/ 0.0-1.5°Clay: Little silt, trace sand, moist, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics and black roots. Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown (10 YR 4/4), trace organics and black roots. Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'. 6.0-8.0° 0.0-0.4' (Clay: Same as above. 0.4-1.4' Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 8.0-10.0° 0.0-8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, with the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400  | 1 12 2333 0 0-2.0/                                    |                         |           |            |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 2 2233 20.4.07   | 0.0-1.0 Topsoil.                                      |                         |           |            |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 2 2233 20.4.07   |   |                         |           | _          |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 2 2233 20.4.07   |   |                         |           | _          |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 3 18 2233 4 4.0-6.0/   | 2   | 12                      | 2223      | -2         | 2.0-4.0′/                                      |                                   |                               |                 |          |           |            | 0.00      |            | -      |       |        |     |        |
| 18   2233   4   4.0-6.0'/   0.0-1.5'Clay: Little silt, trace sand, moist, stiff (HP = 2.5). medium to high plasticity, dark yellowish brown (10 YR 4'4), trace organics and black roots. Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'.   6.0-8.0'   0.0-0.4'Clay: Same as above.   0.4-1.4'Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).   Note: No odor.   4.1-7'Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics.   Note: No odor.   8.0-10.0'   0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to subrounded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular   1.26 N. Jefferson St., Suite 400   |   |                         |           |            |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| Note: No odor, orange and gray mottling.  4.0-6.0'/ 0.0-1.5'Clay: Little silt, trace sand, moist, stiff (HP = 2.5). medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics and black roots. Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'. 6.0-8.0' 0.0-0.4'Clay: Same as above. 0.4-1.4'Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7'Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 1.4-1.7'Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0' 0-0.8'Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular hereby certify that the information on this form is true and correct to the best of my knowledge.    Signature  |   |                         |           |            |  |                                   | iowish brov                   | vn              |          |           |            |           |            |        |       |        |     |        |
| 0.0-1.5'Clay: Little silt, trace sand, moist, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics and black roots.  Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'.  6.0-8.0'  0.0-0.4'Clay: Same as above. 0.4-1.4'Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 1.4-1.7'Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0' 0-0.8'Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  Ihereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400   |   |                         |           |            |  |                                   | ottling.                      |                 |          |           |            |           |            |        |       |        |     | :      |
| 0.0-1.5'Clay: Little silt, trace sand, moist, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics and black roots.  Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'.  6.0-8.0'  0.0-0.4'Clay: Same as above. 0.4-1.4'Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 1.4-1.7'Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0' 0-0.8'Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  Ihereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400   |   |                         |           | <b>-</b> 4 |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 2.5). medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics and black roots.  Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'.  6.0-8.0' 0.0-0.4' Clay: Same as above. 0.4-1.4' Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8' to 1/4", mostly 1/4", subangular  Ihereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400  | 3   | 18                      | 2233      | _          |  | trace sand i                      | maist stiff(                  | HP =            |          | 4         |            | 0.00      |            |        |       |        |     |        |
| Note: No odor, strong color streams of gray and orange mottling throughout, color change to dark grayish brown at 1.2'.  6.0-8.0' 0.0-0.4' Clay: Same as above. 0.4-1.4' Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yell |   |                         |           | _          | 2.5). medium to high p                         | lasticity, dar                    | rk yellowish                  |                 |          |           |            |           |            |        |       |        |     | 8      |
| orange mottling throughout, color change to dark grayish brown at 1.2.'  6.0-8.0' 0.0-0.4' Clay: Same as above. 0.4-1.4' Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. Note: No odor. Note: No odor. 8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  hereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400  |   |                         |           | -          |  |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 4 20.4 3233 — 6.0-8.0′ 0.0-0.4′ Clay: Same as above. 0.4-1.4′ Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7′ Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0′ 0-0.8′ Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8″ to 1/4″, mostly 1/4″, subangular line, mostly fine, subangular line, and correct to the best of my knowledge. Signature Firm ARCADIS 126 N. Jefferson St., Suite 400  |   |                         |           | _          | orange mottling throu                          |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| 6.0-8.0′ 0.0-0.4′ Clay: Same as above. 0.4-1.4′ Silty Sand: Silt and sand, very wet and soupy, sand is very fine to fine grained, mostly fine subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 1.4-1.7′ Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0′ 0-0.8′ Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8″ to 1/4″ mostly 1/4″, subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400   | 4   | 20.4                    | 3233      | -6         |  |                                   |                               | _/t             |          | -         |            | 0.00      |            |        |       |        |     |        |
| 9.6 3 4 5 6 8 8  |   |                         |           | -          |  | ahove                             |                               |                 |          |           |            |           |            |        |       |        |     |        |
| subangular to subrounded, little to no plasticity, loose, dark yellowish brown (10 YR 3/6).  Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor.  8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400   | - []  |                         |           |            | 0.4-1.4' Silty Sand: Silt                      | and sand, ve                      | ery wet and                   |                 |          |           |            |           |            |        |       |        |     |        |
| loose, dark yellowish brown (10 YR 3/6). Note: No odor. 1.4-1.7' Clay: Little silt, trace sand, wet, stiff (HP = 2.5), medium to high plasticity, dark yellowish brown (10 YR 4/4), trace organics. Note: No odor. 8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fline, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Firm ARCADIS 126 N. Jefferson St., Suite 400   |   |                         |           |            | soupy, sand is very fine subangular to subroun | e to fine grai<br>nded. little to | ined, mostly<br>o no plastici | / finel<br>itv. |          |           |            |           |            |        |       |        |     |        |
| 9.6 3456   |   | 1                       |           |            | loose, dark yellowish b                        |                                   |                               |                 |          |           |            |           |            |        |       |        |     |        |
| brown (10 YR 4/4), trace organics. Note: No odor.  8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fline, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm ARCADIS 126 N. Jefferson St., Suite 400  | 5   | 9.6                     | 3456      | L          | 1.4-1.7' Clay: Little silt,                    |                                   |                               |                 |          |           |            | 4.34      |            |        |       |        |     |        |
| Note: No odor.  8.0-10.0' 0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm ARCADIS 126 N. Jefferson St., Suite 400  |   |                         |           | _          | 2.5), medium to high p                         | lasticity, da                     | rk yellowish                  | ·               |          |           |            |           |            |        |       |        |     |        |
| 0-0.8' Silty Sand: Silt and sand, sand is very fine to fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm ARCADIS 126 N. Jefferson St., Suite 400  | - 7   |                         |           | F          |  | e organics.                       |                               |                 |          |           |            |           |            |        |       |        |     | 1      |
| fine, mostly fine, subangular to suborunded, trace gravel, 1/8" to 1/4", mostly 1/4", subangular  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm ARCADIS 126 N. Jefferson St., Suite 400   |   |                         |           | -          |  |                                   | die                           |                 |          |           |            |           |            |        |       |        |     |        |
| I hereby certify that the information on this form is true and correct to the best of my knowledge.    Firm   ARCADIS   126 N. Jefferson St., Suite 400  | 6   | 13.7                    | 2264      | 10         |  |                                   |                               | ie to [         |          |           |            | 0.70      |            |        |       |        |     |        |
| Signature Firm ARCADIS 126 N. Jefferson St., Suite 400   |   |                         |           | <u> </u>   | trace gravel, 1/8" to 1/4                      | l", mostly 1/4                    | 4", subangula                 |                 |          |           | <u> </u>   | 0.78      |            |        |       |        |     |        |
| 126 N. Jefferson St., Suite 400  |   |                         | y that th | e info     | rmation on this form is t                      | true and cor                      |                               |                 |          | knowle    | dge.       |           |            | 0      |       | _      |     |        |
| Milwaukee, WI (414) 276-7742   |   |                         | -00       | _(         | •  |                                   |                               | 126 N           | ۱.Jef    |           |            |           |            |        |       |        | X   |        |

Boring Number Sample Soil Properties Length All. & Recovered (in) Depth in Feet Soil/Rock Description Compressive Strength Blow Counts And Geologic Origin For Each Major Unit Number and Type Well Diagram Moisture Content PID(FID) Liquid Limit Plastic Limit P 200 to subrounded, poorly sorted, non-plastic, loose, dark yellowish brown (10 YR 4/6). Note: No odor, very wet. 10-12′/ -0.0-1.1' Silty Sand: Same as above. 7 21.6 1123 0.0 Note: Very wet, no odor. 0.0-1.8' Silty Sand: Same as abve. Note: Very wet and soupy, no odor. EOB @ 14' 16 **-** 18 **-** 20 - 22 - 26 28

MW-12S

|                    |                                 |                    | 1             | Route to: Watershed/Wastewater Remediation/Redevelopment                                     | t 🔀 Of          | aste Ma<br>ther | anage    | ment [         | ]               |          |                         |                     |                  |                       |             |                  |
|--------------------|---------------------------------|--------------------|---------------|--|-----------------|-----------------|----------|----------------|-----------------|----------|-------------------------|---------------------|------------------|-----------------------|-------------|------------------|
|                    |                                 |                    |               |  |                 |                 |          |                |                 |          |                         |                     | ı                | Page _                | 1           | _ of2_           |
|                    | //Projecti                      |                    | <br>11 \//    | aubesa/Wl001283.0009.00003   |                 | License         | e/Perr   | nit/Mon        | itoring N       | lumber   |                         | В                   | oring N          |                       | r<br>1P-1   | 2                |
|                    |                                 |                    |               | chief (first, last) and Firm   |                 | Date D          | rilling  | Started        | •               | Date I   | Orilling C              | omple:              | ted              | Drilling              |             |                  |
|                    | lame To                         |                    |               | Last Name Schmelfeldt/Sch  | nultz           | 0               | 9/24     | 4/12           |                 |          | 9/30/                   | •                   |                  |                       | _           | Rotary           |
|                    | Boart<br>ique Well              |                    | ear           | DNR Well ID No. Well Name  |                 | Final S         | tatic    | Water Le       | evel            | Surfac   | e Elevati               | on                  | $\dashv$         | Boreh                 | ole D       | ia <b>met</b> er |
| 116                | 2014 004-0                      | - 57 (             |               | MP-13ted: ☐ ) or Boring Location ☐   |                 |                 |          | Fee            | t               | 86       | 54.49<br>irid Loca      | Fee                 | t MSL            | 8″ to<br><u>6″ to</u> | 37'<br>200' | inches           |
| State              | Plane                           | 100296.            | 49            | N, <u>2144079.14</u> E S□/C□   |                 | Lat .           |          |                |                 | rocare   | ria Loca                | tion                | N                |                       |             | □E               |
| Facility           | 1/4 of                          |                    |               | F Section ,T N,R   | <u> </u>        | Long            |          |                |                 |          |                         | et 🗀                | S _              |                       |             | Feet W           |
|                    | יוט<br>1 <b>3125</b> 3          | 320                |               | ounty Cour<br>Dane   | inty Code<br>13 |                 | ľ        | ivil Tow       | n(City)o<br>Mad |          | 2                       |                     |                  |                       |             |                  |
| Sai                | nple                            |                    | Г             |  | l l             |                 |          |                |                 |          |                         | Soil F              | rope             | rties                 |             |                  |
|                    | j se (ii)                       | , vi               | i i           | Soil/Rock Description  |                 |                 |          |                |                 |          | ě                       |                     |                  |                       |             |                  |
| i e d              | h All.                          | ount               | ie<br>R       | And Geologic Origin For<br>Each Major Unit   |                 |                 |          | .u             | E               | ۵        | ressi<br>Jth            | a t                 |                  |                       |             | ents             |
| Number<br>and Type | Length All. &<br>Recovered (in) | Slow Counts        | Depth in Feet |  |                 |                 | USCS     | Graphic<br>Log | Well<br>Diagram | (PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit  | Plastic<br>Limit      | 200         | RQD/<br>Comments |
| 1                  | 1                               | -                  | 0             | 0-14'/   |                 | $\dashv$        |          | 0 1            | _ N L           |          | 0.8                     | 20                  |                  |                       | 凸           | ~ O              |
|                    |                                 |                    |               | Blind drill.   |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    | L             | *  |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    | _             |  |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
| 2                  | 0.5                             | 6814               | 14            | 14-16'/  |                 | -               |          | 5              |                 | 0.6      |                         |                     | $\vdash$         |                       |             |                  |
| _                  | 9.6                             | 17                 | -             | 14-14.4' Clay: Trace to little sand, very fi   |                 |                 |          | '              |                 | 0.0      |                         |                     |                  |                       |             |                  |
|                    | 1                               |                    |               | subangular to subround, trace silt, trace slag throughout, medium to high plast              |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
| _ [                |                                 |                    |               | soft (HP = 1.0), poorly sorted, silt partin  | ngs thro        | ugh-            |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    | 16            | out, pocketes of orange oxidized iron s<br>strong odor, dark brown (10 YR 3/3).              | staining,       | <u> </u>        |          |                |                 |          |                         |                     |                  |                       |             |                  |
| 3                  | 14.4                            | 4658               | L             | 4.4-14.8' Pulverized granite and dolos   | stone           |                 |          |                |                 | 3.5      |                         |                     |                  | İ                     |             |                  |
|                    |                                 |                    | -             | fragments.<br>16-18'/  |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
| - 1                |                                 |                    | -             | 16-17.2' Sand: Sand is very fine to med  | dium, ma        | ainly           |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    | -             | very fine to fine, subangular to subrou<br>silt, little clay, trace to little gravel, 1/8"   |                 | e               |          |                |                 |          |                         |                     |                  |                       |             |                  |
| 4                  | 13.2                            | 3667               | 18            | mainly 1/8-1/2", subround, poorly sorte  | ed, medi        |                 | $\dashv$ |                |                 | 3.7      |                         |                     | <del>  -  </del> |                       | $\dashv$    |                  |
|                    |                                 |                    |               | plasticity, rapid dilatany, wet, medium of $(HP = < 0.5)$ , no odor, yellow brown            |                 |                 |          |                |                 |          |                         |                     |                  | ľ                     |             |                  |
|                    |                                 |                    |               | 5/4).  |                 |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    | L             | 18-20'/<br>18-19.1' Sand: Sand is very fine to med   | dium. ma        | ainly           |          |                |                 |          |                         |                     | .                |                       | - [         |                  |
|                    |                                 |                    | - 20          | yery fine to fine, subangular to subrour   | ınd, som        |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
| 5                  | 10.8                            | 24716              | _             | silt, little clay, trace to little gravel, 1/8" -<br>mainly 1/8-1/2", subround, poorly sorte |                 |                 |          |                |                 | 3.4      |                         |                     | . 1              |                       |             |                  |
|                    |                                 |                    | F             | plasticity, rapid dilatany, wet, medium o  | dense, v        |                 |          | i              |                 |          |                         |                     | ı l              |                       |             |                  |
|                    |                                 |                    | -             | soft (HP = $< 0.5$ ), no odor, yellow brown $5/4$ ).   | n (10 YR        |                 |          |                |                 |          |                         |                     |                  |                       |             |                  |
|                    |                                 |                    |               | 20-22'/  |                 | '               |          |                |                 |          |                         |                     | .                |                       |             |                  |
| 6                  | 12                              | 13 35              | -22           | 20-20.9' Sand: Sand is very fine to med<br>very fine to fine, subangular to subrour          |                 |                 |          | $\dashv$       |                 | 3.4      |                         |                     |                  |                       | $\dashv$    |                  |
| l herel            | l<br>by certify                 | 10-1"<br>/ that th | e,info        | rmation on this form is true and correct   |                 | - /             | mv k     | nowler         | dae.            |          |                         |                     |                  |                       |             |                  |
| Signat             |                                 |                    | 6             | 00+_1  | Firm            | ARCAI           | DIS      |                | St., Suit       | 0.400    |                         |                     |                  |                       |             |                  |
|                    |                                 | _ =                |               | 4 V V 4 //   | 1               | 1 Z V 1 N.      | יווסר.   | C13011 1       | ıı, Jull        | C 700    |                         |                     |                  |                       |             |                  |

| Boring Number  | MP-13                                      |   |      |                |                 |          |                         |                     | ı               | Page _           | _2_   | of <u>2</u>      |
|--|--|---|------|----------------|-----------------|----------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sample   | <u> </u>                                   |   |      |                |                 |          |                         | Soil Pi             | operti          | es               |       |                  |
| Number<br>and Type<br>Length All.&<br>Recovered (in) | Blow Counts<br>Depth in Feet               | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | (PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|  | - 24                                       | silt, little clay, trace to little gravel, 1/8" - 1.5",<br>mainly 1/8-1/2", subround, poorly sorted, medium<br>plasticity, rapid dilatany, wet, medium dense, very<br>soft (HP == <0.5), no odor, yellow brown (10 YR<br>5/4).  |      |                |                 | -        |                         |                     |                 |                  |       |                  |
| 7 12   | 17 35 41-5"                                | 22-24'/ 22-23.1' Sand: Sand is very fine to medium, mainly very fine to fine, subangular to subround, some silt, little clay, trace to little gravel, 1/8" - 1.5", mainly 1/8-1/2", subround, poorly sorted, medium plasticity, rapid dilatany, wet, medium dense, very   |      |                |                 | 4.4      |                         |                     |                 |                  |       |                  |
| 8 13.2   | 28 30 20-3"                                | soft (HP = <0.5), no odor, yellow brown (10 YR 5/4). Note: Sand becoming coarser, large sandstone and dolomite fragments at 22.2-22.6′.  24-26′/ 24-25′ Sand: Sand is fine to coarse, mainly fine to medium, subangular to subround, some silt,   |      |                |                 | 6.9      |                         |                     |                 |                  |       |                  |
| 9 4.8  | - 28<br>53-4" - 30<br>30<br>32<br>34<br>36 | medium, subangular to subround, some silt, trace clay, little gravel, 1/8-1/4", subround, poorly sorted, low to no plasticity, rapid dilatancy, wet, medium dense, medium stiff (HP = 2.0), no odor, yellow brown (10 YR 5/4).  26-28'/ 26-27.1' Sand: Sand is fine to coarse, mainly fine to medium, subangular to subround, some silt, trace clay, little gravel, 1/8-1/4", subround, poorly sorted, low to no plasticity, rapid dilatancy, wet, medium dense, medium stiff (HP = 2.0), no odor yellow brown (10 YR 5/4).  28-30'/ 28-28.4' Crushed rock fragments of glauconitic sandstone.  End of Logging @ 30.0' Bedrock @ 31.0' EOB @ 200.0' |      |                |                 | 3.1      |                         |                     |                 |                  |       |                  |
|  | - 38<br>- 38<br>- 40                       |   |      |                |                 |          |                         |                     | ,               |                  |       |                  |

|                    |                                 |                         | <u>!</u>       | Route to: Watershed/Wastewater Remediation/Redevelopment                                   |            |          |          | ment [            |                      |                  |                         |        |             |                       |             |                  |
|--------------------|---------------------------------|-------------------------|----------------|--|------------|----------|----------|-------------------|----------------------|------------------|-------------------------|--------|-------------|-----------------------|-------------|------------------|
|                    |                                 |                         |                | •  |            | ,        | 00       |                   |                      |                  |                         |        | ı           | Page                  | 1           | of 2             |
| Facility/I         |                                 |                         | <b>71 \</b> // | aubesa/WI001283.0009.00003   |            | Licens   | e/Perr   | nit/Mon           | itoring N            | lumber           |                         | Во     | oring N     | iumber                | IP-1        |                  |
|                    |                                 |                         |                | chief (first, last) and Firm   |            | Date D   | Drilling | Started           | T                    | Date (           | Orilling C              | omple  | ted         | Drilling              | _           |                  |
|                    |                                 | odd/N                   |                | Last Name Schmelfeldt/Schu   | ultz       | (        | )9/2:    | 5/12              |                      | 1                | 0/22/                   | 12     |             | Mi                    | ud F        | Rotary           |
| Wi Uniq            |                                 | Longy<br><sup>No.</sup> | ear            | DNR Well ID No. Well Name  | $\dashv$   | Final    | Static   | Water Le          | evel                 | Surfac           | e Elevati               | on     |             | Boreh                 | ole D       | iameter          |
| Local Gr           | id Origin                       | . 🗖 (                   | estimat        | ted: ☐ ) or Boring Location ☐  |            |          |          | Fee               |                      | Local G          | irid Loca               |        | t_MSL       | 8" to<br><u>6" to</u> | 37′<br>200′ | inches           |
| State Pl           | ane                             | ' Ш (                   | CSUITIA        | N, E S □ /C □  |            | Lat      |          |                   |                      | Local C          | nia Loca                |        | N           |                       |             | □E               |
| Facility I         | 1/4 of                          |                         |                |  | E W        | Long     |          | ivil Tow          | r(/City)o            | r Village        |                         | et 🗆   | s <u> </u>  |                       | _           | Feet 🔲 W         |
| •                  | 31253                           | 320                     |                | Dane   | 13         |          |          | -1411 1044        | Mad                  |                  | -                       |        |             |                       |             |                  |
| Sam                |                                 |                         |                |  |            |          |          |                   |                      |                  |                         | Soil P | rope        | rties                 |             |                  |
|                    | Length All. &<br>Recovered (in) | nts                     | Feet           | Soil/Rock Description<br>And Geologic Origin For   |            |          |          |                   |                      |                  | Compressive<br>Strength |        |             |                       |             | ıts              |
| Number<br>and Type | gth Aí<br>overe                 | Blow Counts             | Depth in Feet  | Each Major Unit  |            |          | S        | Graphic<br>Log    | Well<br>Diagram      | (ID)FID          | ngth                    | sture  | rit<br>Tr   | itic<br>it            | 200         | RQD/<br>Comments |
| Nun                | Rec                             | Blov                    |                |  |            | _        | USCS     | Grap              | Wel                  | (2)              | o st                    | Moi    | Liqu<br>Lim | Plastic<br>Limit      | P 2         | . G . G          |
| 1                  |                                 |                         | L <sup>0</sup> | 0-18'/<br>Blind drill.   |            |          |          |                   |                      |                  | ĺ                       |        |             |                       |             |                  |
|                    |                                 |                         | -              |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         |                |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
| W                  |                                 |                         | 14             |  |            | İ        |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         | -              |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         | F              |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         |                |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
| P*                 |                                 |                         | <b>–</b> 16    |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         | F              |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
| 4                  |                                 |                         | -              |  |            | - 1      |          |                   |                      |                  |                         |        |             |                       |             |                  |
| i.                 |                                 |                         |                |  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    | 22.0                            |                         | 18             | 18-20'/  |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
| 2                  | 22.8                            | 6386                    | F              | Sand: Sand is very fine to medium, mai   |            |          |          |                   |                      | 0.6              |                         |        |             |                       |             |                  |
|                    |                                 |                         | -              | fine to fine, subangular to subround, so<br>trace clay, trace to little gravel, 1/8"-1", n |            |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         |                | 1/4", subround, poorly sorted, wet, rapic  | d dilatar  | псу,     |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         | 20             | soft (HP = 0.5), low plasticity, no odor, y<br>brown (10 YR 5/4).                          | yellowisi  | <u>"</u> |          |                   |                      |                  |                         |        |             |                       |             |                  |
| 3                  | 14.4                            | 6458                    | -              | 20-22'/<br>Sand: Sand is very fine to medium, mai  | inly yon   | ,        |          |                   |                      | 0.5              |                         |        |             |                       |             |                  |
|                    |                                 |                         | -              | fine to fine, subangular to subround, so   | ome silt,  |          |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         |                | little clay, trace gravel, 1/8"-1", mainly 1/<br>round, poorly sorted, crushed black roc   |            | ub-      |          |                   |                      |                  |                         |        |             |                       |             |                  |
|                    |                                 |                         | 22             | fragments at 20.4′, wet, rapid dilatancy, Q.5), low plasticity, no odor, yellowish br      | , soft (HP |          |          |                   |                      |                  | <u> </u>                |        |             |                       |             |                  |
| 4                  | 10.8                            | 11 20<br>34 8-1'        | -              | YR 5/4).   |            |          |          |                   |                      | 0.2              |                         |        |             |                       |             |                  |
| I hereb<br>Signatu |                                 | y that th               | e info         | rmation on this form is true and correct   |            | oest o   |          | knowie            | dge.                 |                  |                         |        |             |                       |             |                  |
| 3,                 | 1/1/8                           | 1 4                     | 2              | ld End   | 1          | 126 1    | N. Jeff  | ferson<br>e, WI ( | St., Suit<br>414) 27 | te 400<br>'6-774 | .2                      |        |             |                       |             |                  |

| Sam                | ple                             |             |               |   |      |                |                 |                     |                         | Soil Pi             | operti          | es               |       |          |
|--------------------|---------------------------------|-------------|---------------|---|------|----------------|-----------------|---------------------|-------------------------|---------------------|-----------------|------------------|-------|----------|
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | an <del>f</del> (ah | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | )<br>(UO |
|                    |                                 |             | 24            | 22-24'/ Sand: Sand is very fine to coarse, mainly fine to medium, subangular to subround, little silt, little gravel, grannule to large pebble, mainly small pebble, subangular to subround, trace clay, poorly |      |                |                 |                     |                         |                     |                 |                  |       |          |
| 5                  | 8.4                             | 37 16       | -             | orted, wet, rapid diliatancy, loose, no odor, low plasticity, yellowish brown (10 YR 5/4).  24-26'/ Sand: Sand is very fine to coarse, mainly fine to medium, subangular to subround, little silt, little       |      | :              |                 | 1.3                 |                         |                     |                 |                  |       |          |
|                    |                                 | 11 46       | 26            | gravel, grannule to large pebble, mainly small<br>pebble, large dolostone fragments at 0.2-0.6", welf,  |      |                |                 |                     |                         |                     |                 | <u> </u>         |       |          |
| 6                  |                                 | 8-1"        | -<br>-<br>-   | rapid dilatancy, loose, no odor, low plasticity, yellowish brown (10 YR 5/4).  26-28'/ Sand: Sand is very fine to coarse, mainly fine to medium, subangular to subround, little silt, some                      |      |                |                 | 0.6                 |                         |                     |                 |                  |       |          |
| 7                  |                                 |             | 28<br>-<br>-  | gravel, grannule to large pebble, mainly small<br>bebble, wet, rapid dilatancy, loose, no odor, low<br>plasticity, yellowish brown (10 YR 5/4).   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | -<br>-<br>-30 | 28-30'/<br>No recovery.<br>30-200' Blind drill.   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | -<br>-<br>-   | End of Logging @ 30.0'<br>Bedrock @ 44.0'<br>EOB @ 200.0'   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 | ,           | -<br>- 32     |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | -             |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | - 34<br>-     |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | -<br>36       |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | -             |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | - 38<br>-     |   |      |                |                 |                     |                         |                     |                 |                  |       |          |
|                    |                                 |             | - 40          |   |      |                |                 |                     |                         |                     |                 |                  |       |          |

| - CP3.11.          |                                |                | <u>!</u>      | Route to: Watershed/Wastewater<br>Remediation/Redevelop                     |                 | Waste N<br>Other |          | ement 🗀        | 1               |          |                         |                     |          |                  |             |                   |
|--------------------|--------------------------------|----------------|---------------|---|-----------------|------------------|----------|----------------|-----------------|----------|-------------------------|---------------------|----------|------------------|-------------|-------------------|
|                    |                                |                |               |   |                 |                  |          |                |                 | _        |                         |                     |          |                  |             | _ of2             |
| -                  | Project N                      |                | 24.14/        | A44001202.0000.00   | 2002            | Licen            | se/Per   | mit/Mon        | itoring N       | lumber   |                         | В                   | oring N  | lumber           |             |                   |
|                    | _                              |                |               | aubesa/WI001283.0009.00   | J003            | Date             | Drilling | Started        | -               | Date     | Orilling C              | omple               | tod      | JV<br>Drilling   | IP-1        |                   |
| -                  |                                | odd/N          |               | Last Name Schmelfeldt/  | Schultz         | l                |          |                |                 |          | -                       |                     |          |                  |             | Rotary            |
|                    |                                | Longy          |               | 225 Maine Selfficherd (   | SCHARZ          |                  | 11/9     | /2012          |                 | 1        | 2/11/                   | 2012                | :        | 1911             | uu r        | total y           |
|                    | que Well                       |                |               | DNR Well ID No. Well Name   | 1               | Final            | Static   | Water Le       | vel             | Surfac   | e Elevati               | on                  |          | Boreh            | ole D       | ian <b>nete</b> r |
| 1 1 5              | at a contact.                  |                |               | tod C \ av Berine Location C  |                 | <u> </u>         |          | Fee            | t               | 1 ocal G | irid Loca               |                     | MSL      | <u>6" to</u>     | 41'<br>200' | inches            |
| State P            | lane                           | , П,           | езины         | ted: ( ) or Boring Location ( E S (   | ]/C   <u>/N</u> | Lat              |          |                |                 | Local C  | iiia Loca               |                     | N        |                  |             | □⊧                |
|                    | 1/4 of                         |                | 1/4 of        | f Section,TN,R  | 🛮 🗖 🖫           | Long             |          |                |                 |          | Fe                      | et 🗖                |          |                  |             | Fe <b>et</b> W    |
| Facility           | ID                             |                | Co            | ounty   | County Cod      | e                | T        | Civil Tow      |                 |          | 2                       |                     |          |                  |             |                   |
| 11                 | 31253                          | 320            |               | Dane  | 13              |                  |          |                | Mad             | ison     |                         |                     |          |                  | -           |                   |
| Sam                | ıple                           |                |               |   |                 |                  |          |                |                 |          |                         | Soil F              | rope     | rties            |             |                   |
|                    | % (ii)                         | .s             | #             | Soil/Rock Description   |                 |                  |          |                |                 |          | i, e                    | ŀ                   |          |                  |             | ,va               |
| er<br>pe           | All.                           | onu            | ة.<br>18      | And Geologic Origin<br>Each Major Unit                                      | For             |                  |          | U              | Ε               | ا ا      | ress                    |                     |          |                  |             | hent              |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts    | Depth in Feet | Luci major omi  |                 |                  | USCS     | Graphic<br>Log | Well<br>Diagram | (PD)FID  | Compressive<br>Strength | Moisture<br>Content | quic     | Plastic<br>Limit | 200         | RQD/<br>Comments  |
|                    | a se                           | ä              | 0             | 0.40//  |                 |                  | 5        | 9 3            | <u>≯ Ö</u>      | (a)      | 2 22                    | ΣŬ                  |          | <u>r</u> ::      | ط           | ž Č               |
| 1                  |                                |                | Ļ             | 0-10'/<br>Blind drill,  |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | F             |   |                 | ļ                |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | F             |   |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | _             |   |                 | i                |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                | 22.20          | 10            | 10-12'/   |                 |                  |          |                |                 | 0.0      |                         | <u> </u>            |          |                  |             |                   |
| 2                  | 16.8                           | 23 20<br>16 27 | L             | 0-0.9' Sand: Very fine to fine, suba  | ingular to si   | ub-              |          |                |                 | 0.0      |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | round, some silt, trace to little clay                                      | , moderate      | to               |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | poor sorting, medium dense to lo  |                 | odor,            |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | low plasticity, yellowish brown (10 0.9-1.4' Silt: Little clay, trace sand, |                 | sub-             |          |                | •               |          |                         |                     |          |                  |             |                   |
|                    |                                |                | 12            | angular to subround, trace gravel   |                 |                  |          |                | ;               |          |                         | ļ                   |          |                  |             |                   |
| 3                  | 15.6                           | 6567           | L             | to poorly sorted, medium to high  |                 |                  |          |                |                 | 0.8      |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | dilatancy, no odor, very dark yello<br>YR 4/4).                             | wish brown      | (10              |          |                |                 |          |                         | ŀ                   |          |                  |             |                   |
|                    |                                |                | L             | 12-14'/   |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | 0-1.3' Sand; Fine to medium mos   | tly fine, sub   | -                |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | 14            | angular to subround, little gravel,   |                 |                  |          |                |                 |          |                         |                     |          |                  | <u> </u>    |                   |
| 4                  | 10.8                           | 20 22          | L¨            | angular to subround, mostly 1/4-<br>clay, poorly sorted, wet, rapid dila    |                 |                  |          | •              |                 | 0.9      |                         |                     |          |                  |             |                   |
|                    |                                | 17 13          | L             | odor, brown (10 YR 4/3).  | taricy, 1003e   | ,,110            |          | 1              |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | L             | 14-16'/   |                 |                  |          |                |                 |          |                         |                     | 1        |                  |             |                   |
|                    |                                |                | L             | 0-1.2'Sand; Fine to medium most   |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | L16           | angular to subround, little gravel, angular to subround, mostly 1/4-        |                 |                  |          |                |                 |          |                         | L                   | L        |                  | L           |                   |
| 5                  | 4.8                            | 10 17          | 16            | day, poorly sorted, wet, rapid dila   |                 |                  |          |                |                 | 0.0      |                         |                     |          |                  |             |                   |
|                    |                                | 18 17          | Γ             | odor, yellowish brown (10 YR 5/4  |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                | Γ             | 16-18'/   |                 |                  |          |                |                 |          |                         | [                   |          | 1                |             |                   |
|                    |                                |                |               | 0-0.4' Sand; Fine to medium most  |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
|                    |                                |                |               | angular to subround, little gravel, angular to fractured, mostly 1/4-1      |                 |                  |          |                |                 |          |                         |                     |          |                  |             |                   |
| 6 5                | 14.4                           | 14 13          | 18            | poorly sorted, wet, rapid dilatancy   |                 |                  |          | <u> </u>       |                 | 0.0      |                         |                     |          | <u> </u>         |             |                   |
|                    |                                | 12 20          | <u> </u>      | brown (10 YR 4/3).  |                 | <br>             | -f v     |                |                 |          |                         |                     | <u> </u> |                  | <u> </u>    | L                 |
| l hereb<br>Signatu |                                | y tnat th      | ie into       | ormation on this form is true and co  | Firm            | ARC              | OF MY    | Knowle         | uge.            |          |                         |                     |          |                  |             |                   |

| Boring Number | MP- <u>15</u> | _ |
|---------------|---------------|---|
|               |               |   |

Page \_\_2\_ of \_\_2\_

| Sam                | ple                             |                |                          |   | •    |                |                 |          |                         | Soil Pr             | operti          | 25               |       |                  |
|--------------------|---------------------------------|----------------|--------------------------|---|------|----------------|-----------------|----------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts    | Depth in Feet            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | (PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                 |                | -20                      | 18-20'/<br>0-1.2' Sand: Fine to medium mostly fine, sub-<br>angular to <b>sub</b> round, little gravel, 1/8-1", sub-<br>angular to <b>fra</b> ctured, mostly 1/4-1/2", little silt and<br>clay, poorly <b>so</b> rted, wet, rapid dilatancy, loose, no  |      |                |                 |          |                         |                     |                 |                  |       | 0                |
| 7                  | 16.8                            | 16 22<br>23 36 | -                        | bdor, brown (10 YR 4/3).  20-22'/ 0-1.4' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no  |      |                |                 | 0        |                         |                     |                 | :                |       |                  |
| 8                  | 16.8                            | 21 22<br>35 50 | - 22<br>-<br>-<br>-<br>- | pdor, brown (10 YR 4/3).  22-24'/  0-1.4' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no odor, brown (10 YR 4/3).                              |      |                |                 | 0.4      |                         |                     |                 |                  |       |                  |
| 9                  | 10.8                            | 40 22<br>23    | -                        | 24-26"/ 0-0.9" Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no odor, brown (10 YR 4/3).   |      |                |                 | 0.2      |                         |                     |                 |                  |       |                  |
| 10                 | 14.4                            | 48 25<br>25 17 | - 26<br>-<br>-           | 26-28'/ 0-1.2' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no odor, brown (10 YR 4/3).   |      |                |                 | 0.8      |                         |                     |                 |                  |       |                  |
| 11                 | 14.4                            | 9 10<br>10 9   | - 28<br>-<br>-<br>-      | 28-30'/ 0-1.2' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1," subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no odor, light yellowish brown (10 YR 6/4).   |      |                |                 | 1.0      |                         |                     | -               |                  |       |                  |
| 12                 | 14.4                            | 28 23<br>22 25 | - 30<br>-<br>-           | 30-32'/ 0-1.2' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, poorly sorted, wet, rapid dilatancy, loose, no odor, light yellowish brown (10 YR 6/4).   |      |                |                 | 1.0      |                         |                     |                 |                  |       |                  |
| 13                 | 16.8                            | 14 19<br>15 20 | 32                       | 32-34'/ 0-1.4' Sand: Fine to medium mostly fine, subangular to subround, little gravel, 1/8-1", subangular to fractured, mostly 1/4-1/2", little silt and clay, clay lenses 1/4-3/4" thick at 0.6-0.9', poorly sorted, wet, rapid dilatancy, loose, no odor, light yellowish brown (10 YR 6/4). |      |                |                 | 1.6      |                         |                     |                 |                  |       |                  |
| -                  |                                 |                | - 34<br>-<br>-<br>-<br>- | EOB @ 34.0<br>34-200' Blind drill   |      |                |                 |          |                         |                     |                 |                  |       |                  |
|                    |                                 |                | -                        |   |      |                |                 |          |                         |                     |                 |                  |       |                  |

Soil Boring Log Information Form 4400-122 Rev.7-98

|               |           |                                 |                 | <u>!</u>      | Route to: Watershed/Wastewater Remediation/Redevelopm                           |                     |                   |           | ement [        |                 |         |                         |                     |               |                                |                      |                           |
|---------------|-----------|---------------------------------|-----------------|---------------|---|---------------------|-------------------|-----------|----------------|-----------------|---------|-------------------------|---------------------|---------------|--------------------------------|----------------------|---------------------------|
|               |           |                                 |                 |               |   |                     |                   |           |                |                 |         |                         |                     | F             | age _                          | 1                    | of <u>2</u>               |
|               |           | Project N                       |                 |               | 1 111001303 0000 001  | 202                 | Licens            | se/Peri   | mit/Mon        | itoring N       | lumber  |                         | В                   | oring N       | lumber                         |                      |                           |
|               |           |                                 |                 |               | aubesa/WI001283.0009.000 chief (first, last) and Firm                           | 003                 | Data              | Drillin o | Started        | -               | Data    | Orilling C              | omplo               | od I          | IV<br>Drilling                 | IP-1                 |                           |
|               | _         |                                 | odd/R           |               | Last Name Schmelfeldt/l   | Larsen              | l                 | -         |                | - 1             |         |                         | -                   | - [           |                                |                      | Rotary                    |
| Firm          | В         | oart l                          | ongy            |               |   |                     |                   | 11/0      | /2012          |                 | I       | 1/30/                   | 2012                |               |                                | <u></u>              | ———                       |
|               | ·         | ue Well I                       |                 |               | DNR Well ID No. Well Name   |                     | Final             | Static    | Water Le       | t               |         | e Elevati               | Feet                | MSL           | Boreh<br>8″ to<br><u>6″ to</u> | ole D<br>51'<br>200' | iameter<br><u>inc</u> hes |
| Loca          | Gr<br>Pl  | id Origin<br>ane                |                 | estimat       | ted:  ) or Boring Location  | /C□/N□              | Lat               |           |                | 1               | Local G | irid Loca               | tion                | N             |                                |                      | □⊧                        |
| Stat          | ,         |                                 |                 |               | <del></del>   |                     |                   |           |                |                 |         | Fe                      | et 🗖                |               |                                |                      | Feet W                    |
| Facili        | •         |                                 |                 | Co            | Section,TN,R<br>unty  | County Cod          |                   |           | Civil Tow      |                 |         |                         |                     |               |                                |                      |                           |
|               |           | 31253                           | 320             |               | Dane  | 13                  |                   | _         |                | Mad             | ison    |                         | C - 1 C             |               |                                |                      |                           |
| S             | am        | ple                             |                 |               |   |                     |                   |           |                |                 |         |                         | Soil P              | ropei         | rties                          |                      |                           |
|               |           | . &<br>I (in)                   | ţ;              | eet           | Soil/Rock Description   |                     |                   |           |                |                 |         | sive                    |                     |               |                                |                      | t                         |
| )er           |           | th All                          | Cour            | ië            | And Geologic Origin Fo<br>Each Major Unit                                       | or                  |                   |           | iĘ             | am              | ₽       | ores                    | ture                | σ.            | .⊔                             | 0                    | men ,                     |
| Number        | 300       | Length All. &<br>Recovered (in) | Blow Counts     | Depth in Feet |   |                     |                   | USCS      | Graphic<br>Log | Well<br>Diagram | PID FID | Compressive<br>Strength | Moisture<br>Content | iquí-<br>imit | Plastic<br>Limit               | P 200                | RQD/<br>Comments          |
| 1             |           |                                 |                 | 0             | 0-28'/  |                     |                   |           |                |                 | Ť       | 0 01                    |                     |               |                                |                      |                           |
|               |           |                                 |                 | _             | Blind drill.  |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               | П         |                                 |                 |               |   |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 |               |   |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 | - 28          |   |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
| 2             |           | 9.6                             | 35<br>50/2"     | L             | 28-30'/<br>0-0.8' Sand: Very fine to fine, mostly                               | v fine suh-         | .                 |           |                |                 | 0.0     |                         |                     |               |                                |                      |                           |
|               | И         |                                 | 30,2            | L             | angular to subround, little silt, little  | gravel, 1/8         | 3-1",             |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               | П         |                                 |                 | ļ_            | mostly 1/2", subangular to subroun-<br>round, poorly sorted, wet, rapid dila    |                     |                   |           |                |                 | l       |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 | F             | low plasticity, medium stiff (HP = 2.   |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
| 3             |           | 10.0                            |                 | - 30          | brownish yellow (10 YR 6/6).  |                     |                   |           |                |                 | 0.0     |                         |                     |               |                                |                      |                           |
| 3             |           | 10.8                            | 18 39<br>50/4"  | F             | 30-32'/<br>0-0.8' Sand: Very fine to fine, mostl                                | v fine, sub         | _                 |           |                |                 | 0.0     |                         |                     |               |                                |                      |                           |
|               | П         |                                 |                 | -             | angular to subround, little silt, som   | e gravel, 3         | /4-1",            |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               | П         |                                 |                 | l-            | angular to fractured, mostly subrous sorted, wet, rapid dilatancy, no to lo     |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 | <b>⊢</b>      | medium stiff (HP = $2.25$ ), no odor, t   |                     | ,,                |           |                |                 |         |                         |                     |               |                                |                      |                           |
| 4             |           | 9.6                             | 20 37           | 32            | vellow (10 YR 6/6).   |                     | /                 |           |                |                 | 0.0     |                         |                     |               |                                |                      |                           |
|               |           |                                 | 50/4"           |               | 32-34'/   |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               | И         |                                 |                 |               | 0-0.8' Sand: Fine to medium, subar round, little clay, little silt, little grav |                     | ub-               |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 |               | mostly 1/2", subangular to subroun  | d, mostly s         |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
| 4             |           |                                 |                 | - 34          | round, poorly sorted, saturated, rap<br>flow to medium plasticity, medium       |                     |                   |           |                |                 | ļ       |                         |                     |               |                                |                      |                           |
| 5             |           | 12                              | 14 28<br>38 50/ | _             | 2.25), no odor, brownish yellow (10   |                     |                   |           |                |                 | 0.0     | 1                       |                     |               |                                |                      |                           |
|               |           |                                 | 3"              | L             | 34-36'/   |                     | la                |           |                |                 | 1       |                         |                     |               |                                |                      |                           |
|               | П         |                                 |                 | F             | 0-1.0' Sand: Very fine to medium, n<br>angular to subround, some silt, littl    |                     |                   |           |                |                 |         |                         |                     |               |                                |                      |                           |
|               |           |                                 |                 | F             | gravel, 1/4-2" angular to fractured,  | trace clay,         |                   |           | •              |                 |         |                         |                     |               |                                |                      |                           |
| 6             |           | 15.6                            | 30 31           | -36           | poorly sorted, wet, rapid dilatancy,<br>medium stiff (HP = 2.5), no odor, br    |                     | city,             |           |                |                 | 0.0     |                         | <b></b>             | <u> </u>      |                                |                      |                           |
|               |           |                                 | 31              | <u> </u>      | yellow (10 YR 6/6).   |                     | $\perp \parallel$ |           | <u> </u>       | Ļ               |         |                         |                     | <u> </u>      |                                |                      |                           |
| l hei<br>Sign | eb<br>atu | y certify<br>re                 | that th         | ie info<br>1  | rmation on this form is true and cor  | rect to the<br>Firm | best o            |           | knowle         | age.            |         |                         |                     |               |                                |                      |                           |
|               | حد        |                                 |                 |               | 1111 1- 1   | 1                   | 126               | Ni lof    | forcon         | C+ Cui          | +~ 400  |                         |                     |               |                                |                      |                           |

| Sam                | iple                            |                |                     |  |        |                |                 |          |                         | Soil P              | roperti         | es               |       |      |
|--------------------|---------------------------------|----------------|---------------------|--|--------|----------------|-----------------|----------|-------------------------|---------------------|-----------------|------------------|-------|------|
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts    | Depth in Feet       | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | uscs _ | Graphic<br>Log | Well<br>Diagram | (PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/ |
|                    |                                 |                | -                   | 36-38'/<br>0-1.3' Sand: Very fine to medium, fine, subangula<br>to subround, some silt, little to some grave, 1/4-<br>2", angular to fractured, trace clay, poorly sorted,   |        |                |                 |          |                         |                     |                 |                  |       |      |
| 7                  | 14.4                            | 50 50<br>16/2" | -38<br>-            | wet, rapid dilatancy, low plasticity, medium stiff (HP = 2.5), no odor, brownish yellow (10 YR 6/6).  38-40'/ 0-1.2' Sand: Very fine to medium, fine, subangular to subround, some silt, little to some gravel, 1/4-2", angular to fractured, trace clay,  |        |                |                 | 0.0      | <u>.</u>                |                     |                 |                  |       |      |
| 3                  | 10.8                            | 37 23<br>18    | - 40<br>-<br>-      | poorly sorted, wet, rapid dilatancy, low plasticity, medium stiff (HP = 2.5), no odor, brownish yellow (10 YR 6/6).  40-42'/ 0-0.9' Sand: Very fine to medium, fine, subangular to subround, some silt, little to some grave, 1/4-2", angular to fractured, trace clay, poorly sorted,   |        |                |                 | 0.0      |                         |                     |                 |                  |       |      |
| 9                  | 21.6                            | 36 34<br>50    | -42<br>-<br>-<br>-  | wet, rapid dilatancy, low plasticity, medium<br>stiff (HP = 2.5), no odor, brownish yellow (10 YR<br>6/6).<br>42-44'/<br>0-1.5' Sand: Very fine to medium, fine, subangular<br>to subround, some silt, little to some grave, 1/4-  |        |                |                 | 0.0      |                         |                     |                 |                  |       |      |
| 10                 | 20.4                            | 7 31<br>53     | - 44<br>-<br>-<br>- | 2", angular to fractured, trace clay, poorly sorted, laminated silt layers throughout, wet, rapid dilatancy, low plasticity, medium stiff (HP = 2.5), no odor, brownish yellow (10 YR 6/6).  1.5-1.8' Sand: Fine to medium, subangular to subround, little to trace silt, trace gravel, 1/8-1/4", subround, poorly sorted, wet, rapid dilatancy,   |        |                |                 | 0.9      |                         |                     |                 |                  | ,     |      |
| 1                  |                                 |                | - 46<br>            | low plasticity, soft (HP = 1.0), no odor, laminated beds of glauconitic sand, olive (5/4 R 4/4).  44-46'/ 0-0.8' Sand: Very fine to medium, fine, subangular to subround, some silt, little to some grave, 1/4-2", angular to fractured, trace clay, poorly sorted, iron staining throughout, wet, rapid dilatancy, low plasticity, medium stiff (HP = 2.5), no odor, brownish yellow (10 YR 6/6). 0.8-1.7' Sand: Very fine to fine, subangluar to subround, trace silt, wellsorted, wet, nonplastic, rapid dilatancy, loose, no odor, iron staining, very pale brown (10 YR 8/4).  EOB @ 46 46-200' Blind drill |        |                |                 |          |                         |                     |                 |                  |       |      |
|                    | :                               |                | -<br>54             | 27.1   |        |                |                 |          |                         |                     |                 |                  |       |      |

|                    |                                 |             | <u>F</u>                                     |                           |               | astewater<br>Redevelop |               | Vaste N<br>Other |                 | ment [            | ]                                |                  |            |        |                |                  |        |                   |
|--------------------|---------------------------------|-------------|--|---------------------------|---------------|------------------------|---------------|------------------|-----------------|-------------------|----------------------------------|------------------|------------|--------|----------------|------------------|--------|-------------------|
|                    |                                 |             |  | 11011                     | , and that it | ricae velop            |               | ,,,,,,,,         |                 |                   |                                  |                  |            |        | 1              | Page             | 1      | of1_              |
| Facility/          |                                 |             | <br>01 Wa                                    | aubesa/WI00               | 1283.0        | 0009.00                | 0003          | Licen:           | se/Perr         | nit/Mon           | itoring N                        | lumber           |            | В      |                | lumber           |        |                   |
|                    |                                 |             |  | chief (first, last) and   |               |                        |               | Date I           | Drilling        | Started           |                                  | Date 0           | Orilling C | omple  | ted            | Drilling         | Met    | hod               |
|                    | <sub>me</sub> To<br>Boart l     |             |  | Last Name                 | Schm          | elfeldt                | /Schultz      | ,<br>1           | 10/10           | 0/201             | 2                                | 1                | 1/08/      | 2012   | 2              | М                | ud F   | Rotary            |
| WI Uniq            |                                 |             |  | DNR Well ID No.           |               | Well Name              | 2             | Final            | Static          | Water Le          | - 1                              | Surfac           | e Elevati  |        | t MSL          | Boreh<br>8" to   | ole Di | iameter<br>inches |
| Local Gr           | id Origin                       |             | estimat                                      | ed: 🔲 ) or Boring         | Location      |                        | /C□/N□        | Lat              |                 |                   |                                  | Local G          | irid Loca  | tion   |                | 0 (0             | 1207   |                   |
| State Pi           | -                               |             |  | N,,T                      |               |                        |               | Long             |                 |                   |                                  |                  | Fe         | et 🗆   |                |                  |        | □ E<br>Feet □ W   |
| Facility I         | D                               |             | Co   | unty                      |               |                        | County Cod    |                  |                 | Civil Tow         | r(/City)o                        |                  |            |        | <u> </u>       |                  |        |                   |
|                    | 31253                           | 320         |  | Dane<br>I                 |               |                        | 13            |                  |                 |                   | Mad                              | ison             | Γ          | Soil F | rope           | rtios            | _      | 1                 |
| Sam                |                                 |             |  | _                         |               | Descriptio             |               |                  |                 |                   |                                  |                  |            | 3011 1 | ТОРЕ           | ties             |        |                   |
| oer<br>ype         | Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet                                |                           | n<br>ı For    |                        |               | ij               | am              | QI.               | Compressive<br>Strength          | ture             | -o         | ن      |                | RQD/<br>Comments |        |                   |
| Number<br>and Type | Lengt<br>Recov                  | Blow        | Dept   |                           |               |                        |               |                  | USCS            | Graphic<br>Log    | Well<br>Diagram                  | (PID)FID         | Comp       | Moist  | Liqui<br>Limit | Plastic<br>Limit | P 200  | RQD/<br>Comi      |
| 1                  |                                 |             | 0  | 0-207'/<br>Blind drill.   |               |                        |               |                  |                 |                   |                                  |                  |            |        |                |                  |        |                   |
|                    |                                 |             | - 207<br>30<br>                              | Bedrock @ 32.0            | ,             |                        |               |                  |                 |                   |                                  |                  |            |        |                |                  |        |                   |
|                    |                                 |             | _<br>_<br>_ 34<br>_<br>_<br>_<br>_<br>_<br>_ |                           |               |                        |               |                  |                 |                   |                                  |                  |            |        | ٠              |                  |        |                   |
| I for any 2        |                                 |             | -  | mation or this f          | nun l- +      | n10 2 2 2 -            | arract to the | . b              | of m            | knowi -           | das                              | <u></u>          |            |        |                |                  |        |                   |
| Signatu            | ire<br>ire                      | L           | ie into                                      | rmation on th <u>is f</u> | oriti is ti   | ue anu c               | Firm          | ARC              | ADIS            |                   |                                  |                  |            |        |                |                  |        |                   |
| 厾                  | ma                              |             | nd   | 大                         | >             |                        | •             | 126<br>Milv      | N. Jef<br>Zauke | rerson<br>e, WI ( | St., Sui <sup>.</sup><br>414) 27 | te 400<br>'6-774 | -2         | -      |                |                  |        |                   |

|                      |                                |                               | <u>F</u>         | Route to: Watershed/Wastewate<br>Remediation/Redevel |               | Waste N<br>Other |               | ement [        | ]               |                            |                         |                     |         |                  |         |                  |
|----------------------|--------------------------------|-------------------------------|------------------|--|---------------|------------------|---------------|----------------|-----------------|----------------------------|-------------------------|---------------------|---------|------------------|---------|------------------|
|                      |                                |                               |                  |  | -1            |                  |               |                |                 |                            |                         |                     | F       | Page _           | 1       | _ of1_           |
|                      | Project N                      |                               | (1001)           | 202.0010.00002                                       | -             | Licen            | se/Peri       | nit/Mon        | itoring N       | lumber                     |                         | В                   | oring N | lumber<br>W-18   |         |                  |
|                      |                                |                               |                  | 283.0010.00002<br>chief (first, last) and Firm       |               | Date             | Drilling      | Started        |                 | Date I                     | Orilling C              | omple               |         | Drilling         |         | hod              |
| First Na             | me Be                          | eaufoi                        | rd =             | Last Name Jones                                      |               |                  |               | 2/201          |                 |                            | 1/02/                   |                     |         | Hol              | low     | Stem             |
| Firm (               | iles E<br>ue Well N            | <u>ngine</u>                  | ering<br>I       | DNR Well ID No.   Well Na                            | me .          | <u>.</u>         |               | Water Le       |                 |                            | e Elevati               |                     |         | Aug              |         | iameter          |
|                      |                                |                               |                  | MV   | V-18S         |                  | - June        | Fee            |                 | 86                         | 57.89                   | Fee                 | t MSL   | 8                |         | inches _         |
| Local Gr<br>State Pl | id Origin<br>lane4             | 40010                         | estimat<br>)4.77 | ted:  ) or Boring Location                           | s□/c□/n□      | Lat              | ·             |                |                 | Local G                    | irid Loca               | tion                | N       |                  |         | □E               |
|                      | 1/4 of                         |                               |                  | Section,TN,R   |               | Long             |               |                |                 |                            |                         | eet 🗆               |         |                  |         | Feet W           |
| Facility I           | <sub>D</sub><br>31253          |                               | Co               | <sub>unty</sub><br>Dane                              | County Coo    |                  | 1             | Civil Tow      | n/City)c        | r Village<br>I <b>ison</b> | 2                       |                     |         |                  |         | _                |
| Sam                  |                                |                               |                  |  |               |                  | $\overline{}$ |                | IVIGG           | 13011                      |                         | Soil P              | rope    | rties            |         | 1                |
|                      |                                |                               |                  | Soil/Rock Descript                                   | tion          |                  |               |                |                 |                            | á                       |                     |         |                  |         |                  |
| _ a                  | Length All.&<br>Recovered (in) | Blow Counts                   | Depth in Feet    | And Geologic Orig                                    |               |                  |               |                | ٦               |                            | Compressive<br>Strength | re<br>It            |         |                  |         | RQD/<br>Comments |
| Number<br>and Type   | ngth                           | οw C                          | pth i            | Each Major Unit                                      |               |                  | USCS          | Graphic<br>Log | Well<br>Diagram | (I) (I)                    | reng                    | Moisture<br>Content | quid    | Plastic<br>Limit | 200     | ) DD/            |
| 1 Z &                | Le<br>Re                       | <u> </u>                      | O O              | 0-30.5′/   |               |                  | ) j           | 9 3            | <u>≯ ā</u>      |                            | 7 %                     | ΣŬ                  | 22      | PI<br>Li         | ۵_      | <u>~~~</u> J     |
|                      |                                |                               | $\vdash$         | Blind drill.   |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | F                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               |                  |  |               |                  |               | . !            |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | 30.5             | P. d. d. 6 20 5/                                     |               |                  |               | ļ              |                 | <u> </u>                   | ļ                       |                     |         |                  |         |                  |
|                      |                                |                               | -                | Bedrock@ 30.5'                                       |               |                  |               |                |                 |                            |                         |                     |         |                  | -       |                  |
|                      |                                |                               | F                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | ┝                |  |               |                  |               |                |                 | 1                          |                         |                     |         |                  | -       |                  |
|                      |                                |                               | ۲ <u>.</u>       |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | <del>-32</del>   |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               |                  |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  | 1             |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  |               |                |                 |                            |                         |                     | -       |                  |         |                  |
|                      |                                |                               | 34               |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | <b> </b>         |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               |                  | ă.   |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | <b>-</b> 36      |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | -                |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | <b> </b>         |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
|                      |                                |                               | <del>-38</del>   |  |               |                  |               |                |                 |                            |                         |                     |         |                  |         |                  |
| l herek              | l<br>by certif                 | <u>l</u><br>y tha <u>t</u> tl | he info          | l<br>ormation on this form is true and               | correct to th | e best           | of my         | knowle         | edge.           |                            |                         | <u> </u>            |         |                  | <u></u> |                  |
| Signati              | ure                            |                               | 5                | 0 ± -+   | Firm          | ARC              | CADIS         | fferson        |                 | ite 400                    | )                       |                     |         |                  |         |                  |
| 1                    | Jux                            | e                             | <b>₹</b>         | x F-v  |               | Milv             | wauke         | e,WI (         | 414) 2          | 76-774                     | 12 ′                    |                     |         |                  |         |                  |

|                     |                                 |                          | <u> </u>   | Route to: Watershed/<br>Remediation                    |   | □ v<br>ment 🗵 C | Vaste M<br>Other |          | ment 🗀         | l                  |           |                         |                     |            |  |                         |                  |
|---------------------|---------------------------------|--------------------------|--|--|---|-----------------|------------------|----------|----------------|--------------------|-----------|-------------------------|---------------------|------------|--|-------------------------|------------------|
|                     |                                 |                          |  |  |   |                 |                  |          |                |                    |           |                         |                     | F          | age  | 1                       | of1_             |
| Facility/           |                                 |                          |  |  |   |                 | Licens           | se/Perr  | nit/Mon        | toring N           | umber     |                         | Во                  | _          | umber  |                         |                  |
|                     |                                 |                          |  | 283.0010.00002   |   |                 |                  | <b>.</b> | <u> </u>       |                    | D         | · · · · · · ·           | Щ.                  |            | <u>/-19[</u>   |                         |                  |
| -                   |                                 |                          |  | chief (first, last) and Firm<br>Last Name <b>Sch</b> l | m alfaldt                                 | /Schultz        | l                | _        | Started        | - 1                |           | Prilling C              |                     |            | Drilling   |                         |                  |
| Firm B              | Boart l                         | odd/N<br>_ongy           |  |  |   |                 |                  |          | 3/201          |                    |           | 0/24/                   |                     |            |  |                         | Rotary           |
| Wi Unio             |                                 |                          |  | DNR Well ID No.  |   | 9D/19D2         | Final            | Static   | Water Le       | t [                | <u>86</u> | Elevation 1.443         | _ Fee               | MSL        | Boreho<br>10"t<br><u>8"to</u>  | ole Di<br>o 35'<br>142' | ameter<br>inches |
| Local Gr<br>State P | id Origir<br>lane <u></u>       | N <b>X</b> I (<br>100150 | estimat<br>0.88                                    | ted:  ) or Boring Location N, 2144078.21               | on □<br>E S[                              |                 | Lat              |          |                |                    | Local G   | rid Loca                | tion 🔲              | N          |  |                         | ΠE               |
|                     | 1/4 of                          |                          |  | Section,T  | N,R                                       | □ E<br>□ W      | Long             |          |                | اجح                |           |                         | et 🗌                | s <u> </u> |  |                         | Feet 🔲 W         |
| Facility I          |                                 | 220                      |  | unty   |   | County Cod      | e                | ľ        | Civil Tow      | r(∕City)or<br>Madi | · Village | <u>.</u>                |                     |            |  |                         |                  |
| _                   | 31253                           | 520                      |  | Dane<br>T  |   | 1.3             | 1                | _        |                | IVIAUI             | 13011     |                         | Soil P              | roper      | ties   |                         |                  |
| Sam                 |                                 |                          |  |  |   |                 |                  |          |                |                    |           |                         | 0                   | , ope      | THE STATE OF THE S |                         |                  |
| Number<br>and Type  | Length All. &<br>Recovered (in) | Blow Counts              | Depth in Feet                                      |  | k Descriptio<br>ologic Origin<br>jor Unit |                 |                  | S        | Graphic<br>Log | Well<br>Diagram    | (PID)FID  | Compressive<br>Strength | Moisture<br>Content | uid<br>iit | Plastic<br>Limit   | P 200                   | RQD/<br>Comments |
| Nur                 | Len<br>Rec                      | Blo                      | O<br>Per   |  |   |                 |                  | USCS     | Gra            | We                 |           | Stre                    | ₽ö                  | Liq<br>Lim | Pla<br>Lin   | ۵                       | ୁ ଓ ଓ            |
|                     |                                 |                          | - 142<br>- 142<br>- 144<br>- 146<br>- 146<br>- 150 | Bedrock @ 27.0°  |   |                 |                  |          |                |                    |           |                         |                     |            |  |                         |                  |
| Signati             |                                 | <del>, /</del>           | iic and  |  | A   | Firm            |                  | ADIS     |                |                    |           |                         |                     |            |  | •                       |                  |
| -1                  |                                 | I_                       |  | 11 /   |   | - 1             |                  | :        |                |                    |           |                         |                     |            |  |                         |                  |

RNCADIS
126 N. Jefferson St., Suite 400
Milwaukee, WI (414) 276-7742

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any purpose. NOTE: See instructions for more information, including where the completed from should be sent.

madison-kipp/Wi001283/graphics/logs/mw19d.ai

State of Wisconsin Department of Natural Resources

|                                  |                |                     | <u>R</u>       | Noute to: Watershed/Wastewater Remediation/Redevelop  | oment 🖾 🖸              | Vaste M<br>Other [ |                      | me <b>nt</b>     | ]                  |                   |                         |                     |            |                  |        |                    |
|----------------------------------|----------------|---------------------|----------------|---|------------------------|--------------------|----------------------|------------------|--------------------|-------------------|-------------------------|---------------------|------------|------------------|--------|--------------------|
|                                  |                |                     |                |   |                        |                    |                      |                  |                    |                   |                         |                     | F          | age              | 1      | of1_               |
| Facility/Proje                   |                |                     |                | <del>-</del> .  |                        | Licens             | e/Pern               | nit/Mon          | itoring N          | umber             |                         | Вс                  | oring N    | lumber           |        |                    |
|                                  |                |                     |                | 283.0010.00002  |                        |                    |                      |                  |                    | <u> </u>          |                         |                     |            | V-20E            |        |                    |
| _                                |                |                     |                | chief (first, last) and Firm<br>Last Name Schmelfeld1 | -/Cabulta              | l                  | _                    | Started          | - 1                |                   | Prilling C              |                     |            | Drilling         |        |                    |
| First Name<br>Firm Boa           |                |                     |                | rast Name 2CUMEIIGIO                                  | /SCHUILZ               | 1                  | 0/24                 | 4/201            | 2                  | 1                 | 0/25/                   | 2012                |            | IVIU             | Ja F   | Rotary             |
| WI Unique V                      |                |                     |                | DNR Well ID No. Well Nam                              |                        |                    | Static '             | Water Le         | vel                |                   | Elevation               |                     |            | Boreho<br>10°t   | ole Di | ameter<br>inches _ |
| Local Grid O                     | rigin          | (a                  | estimate       |   | 0D/20D2                |                    |                      | Fee              |                    |                   | 7.362<br>rid Loca       |                     | MSL        | <u>8"to</u>      | 142'   | inches             |
| State Plane                      | 4              | 1001 <u>40</u>      | ).3            | ed:  ) or Boring Location N, 2144077.85 E S           |                        | Lat                |                      | _                |                    |                   |                         |                     | N          |                  |        | □E                 |
| 1/4                              | 4 of _         |                     | 1/4 of         | Section,T N,R   | B W                    | Long               |                      |                  | ((0))              | 2.011             |                         | et 🔲                | s <u> </u> |                  |        | Feet W             |
| Facility ID                      | 253            | 20                  |                | unty<br>Dane  | County Cod             | e                  | ľ                    | Jivil Iow        | n(City)o<br>Mad    |                   | •                       |                     |            |                  |        |                    |
| Sample                           | <u> </u>       |                     |                |   | 1                      |                    |                      |                  |                    |                   |                         | Soil P              | ropei      | rties            |        |                    |
| <u> </u>                         | ٦              |                     |                | Soil/Rock Description                                 | <b>.</b>               |                    |                      |                  |                    |                   | ē                       |                     |            |                  |        | 1                  |
| %   %                            | Recovered (in) | unts                | Depth in Feet  | And Geologic Origin                                   |                        | - 1                |                      |                  | ر                  |                   | Compressive<br>Strength | يد يو               |            |                  |        | RQD/<br>Comments   |
| Number<br>and Type<br>Length All | over           | Blow Counts         | th ir          | Each Major Unit                                       |                        |                    | NSCS                 | Graphic<br>Log   | Well Diagram       | (PD)FID           | mpr                     | Moisture<br>Content | luid<br>it | Plastic<br>Limit | 200    | 2 8                |
| Nur<br>and<br>Len                | , w            | Blo                 |                |   |                        |                    | Sn                   | SP Q             | N I                |                   | <u>8</u>                | ĕ 0                 | Lig        | 문년               | ۵      | <u> </u>           |
| 1                                |                |                     | 0              | 0-142'/<br>Blind drill.                               |                        | 1                  |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | <u> </u>       | Dirita diliii   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | -              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | -              |   |                        | i                  |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  | _              |                     | 142            | Bedrock @ 28.0'                                       |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | <u> </u>       |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     |                |   |                        |                    |                      | ]                |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     |                |   |                        |                    |                      |                  |                    |                   |                         | ŀ                   |            |                  |        |                    |
|                                  | - 1            |                     | -<br>144       |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  | - 1            |                     |                |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | _              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | F              |   |                        |                    |                      |                  |                    | 1                 |                         |                     |            |                  |        |                    |
|                                  |                |                     | }              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  | - 1            |                     | 146            | 5   |                        |                    |                      | 1                |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | _              |   |                        |                    |                      |                  |                    | 1                 |                         |                     |            |                  |        |                    |
| i                                |                |                     | <b> </b>       |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | <u> </u>       |   |                        |                    |                      | 1                |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | - 148          | ,   |                        |                    |                      |                  |                    |                   |                         |                     |            | 1                |        |                    |
|                                  |                |                     | _ 140          | 'l  |                        |                    | ,                    |                  |                    |                   | !                       | 1                   |            |                  |        |                    |
| 1                                |                |                     | L              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  | l              |                     | _              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | F              |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | 150            |   |                        |                    |                      |                  |                    |                   |                         |                     |            |                  |        |                    |
|                                  |                |                     | _              |   |                        |                    | Ļ                    | <u> </u>         | <u> </u>           |                   |                         |                     |            | <u></u>          |        |                    |
| I hereby c<br>Signature          | ertify         | <u>that tl</u><br>۱ | <u>ne info</u> | rmation on this form is true and                      | correct to the<br>Firm | e best<br>ARC      | <u>of my</u><br>ADIS | Knowle           | eage.              |                   |                         | _                   |            |                  |        |                    |
| By                               | يم ١           |                     | 2              | 1 5 th  |                        | 126                | N. Jef               | ferson<br>ee, Wl | St., Su<br>(414) 2 | ite 400<br>76-774 | )<br><del>1</del> 2     |                     |            |                  |        |                    |

|                    |                                 |             | <u>R</u>        | oute to: Watershed<br>Remediati               | l/Wastewater<br>on/Redevelop | □ v<br>ment 🛛 C       | Vaste M<br>Other |                      | ment 🗌         | ]                   |           |                         |                     |           |                           |        |                   |
|--------------------|---------------------------------|-------------|-----------------|---|------------------------------|-----------------------|------------------|----------------------|----------------|---------------------|-----------|-------------------------|---------------------|-----------|---------------------------|--------|-------------------|
|                    |                                 |             |                 |   |                              |                       |                  |                      |                |                     |           |                         |                     | Ė         | age _                     | 1      | of1_              |
| Facility/          |                                 |             |                 |   |                              | ,                     | Licens           | e/Perr               | nit/Mon        | itoring N           | umber     |                         | Bo                  | _         | umber                     |        |                   |
|                    |                                 |             |                 | 283.0010.00002                                |                              |                       | Data F           | مد سالاند            | Started        |                     | Date F    | rilling C               | omplet              |           | <b>V-21</b> [<br>Drilling |        |                   |
| •                  | me To                           |             |                 | chief (first, last) and Firm<br>Last Name Sch |                              | /Schultz              | l                | _                    |                |                     |           | _                       |                     | - 1       | _                         |        | Rotary            |
| Firm B             | Soart L                         | .ongy       | ear .           |   |                              | •                     |                  |                      | 5/201          |                     |           | 0/26/                   |                     |           |                           |        |                   |
| Wi Uniq            | ue Well N                       | No.         |                 | DNR Well ID No.                               | Well Name                    | D/21D2                |                  | Static '             | Water Le       |                     |           | Elevation 57.77         |                     | t MSL     | Boreh                     | ole Di | iameter<br>inches |
| Local Gr           | id Origin                       | X (         | estimat         | ed: 🔲 ) or Boring Locat                       | ion 🔲                        |                       |                  |                      | Fee            |                     |           | rid Loca                |                     | LINISET   | ي م                       | 1772   |                   |
| State Pl           | ane <u>4</u>                    | 00111       | .07             | N, 2144075.75                                 |                              | ]/C□/N□<br>E          |                  |                      |                |                     |           |                         |                     |           |                           |        | □ E               |
| Facility I         | 1/4 of _                        |             |                 | Section,T <sup>-</sup><br>unty                | N,R                          | County Cod            |                  |                      | ivil Tow       | r(/City)o           | r Village |                         | et 🗆                | <u> 5</u> |                           |        | Feet W            |
|                    | 31 <b>2</b> 53                  | 20          |                 | Dane  |                              | 13                    |                  | _ [                  | 21411 1044     | Mad                 |           | -                       |                     |           |                           |        |                   |
| Sam                | ple                             |             |                 |   |                              |                       |                  | •                    |                |                     |           |                         | Soil P              | rope      | ties                      |        |                   |
|                    | .a. (£                          | s           | l t l           | Soil/Ro                                       | ock Description              | n                     |                  |                      |                |                     | - 5       | ve                      |                     |           |                           |        | S                 |
| Ja ed              | All. a                          | ount        | in Re           |   | eologic Origin<br>Najor Unit | For                   |                  |                      | Ų              | Ę                   | ۵         | ressi                   | ure                 | _         | u                         |        | nent              |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet   | Luciin  | najor ome                    |                       |                  | USCS                 | Graphic<br>Log | Well<br>Diagram     | (PID)FID  | Compressive<br>Strength | Moisture<br>Content | quic      | Plastic<br>Limit          | P 200  | RQD/<br>Comments  |
| Z 78               | 2 %                             | <u> </u>    | 0               | 0-172'/                                       |                              |                       |                  |                      | 0 1            | > 0                 | <u>.</u>  | S                       | ≥ 0                 |           |                           | 4      |                   |
|                    |                                 |             | <b> </b>        | Blind drill.                                  |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | <u> </u>        |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             |                 |   |                              |                       |                  | ,                    |                |                     |           |                         |                     |           |                           |        |                   |
| Щ                  |                                 |             | 172             |   |                              |                       |                  |                      |                |                     | ļ         |                         |                     |           |                           | _      |                   |
|                    |                                 |             | L''-            | Bedrock @ 28.0′                               |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    | :                               |             | -               |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | -               |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | -               | 1   |                              |                       |                  |                      |                |                     | 4.        |                         |                     |           |                           |        |                   |
|                    |                                 |             | 174             |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             |                 |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             |                 |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             |                 | 1   | 40                           |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | 176             |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | -               |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | $\vdash$        |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           | ]      |                   |
|                    | •                               |             | -               | !   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             |                 |   |                              |                       |                  |                      |                |                     |           | İ                       |                     |           |                           |        |                   |
|                    |                                 |             | 178             |   |                              |                       |                  |                      |                |                     |           | -1                      |                     |           |                           | ĺ      |                   |
|                    |                                 |             |                 |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        | <b>!</b>          |
|                    |                                 |             |                 |   |                              |                       | ·                |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | L               | ,   |                              |                       |                  |                      | 1              |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | 180             |   |                              |                       |                  |                      |                |                     |           |                         |                     |           |                           |        |                   |
|                    |                                 |             | <u> </u>        | <u> </u>                                      |                              |                       |                  | <u> </u>             | <u> </u>       |                     |           |                         |                     |           |                           |        |                   |
| l hereb<br>Signatu |                                 | y that t    | he info         | rmation on this form                          | is true and o                | orrect to the<br>Firm |                  | <u>of my</u><br>ADIS | knowle         | edge.               |           |                         |                     |           |                           |        |                   |
| *                  | 40-                             | ر<br>پ ب    | Ď               | UES   | 1                            |                       | 126              | N. Jef               | ferson         | St., Sui<br>(414) 2 | te 400    | )<br>12                 |                     |           |                           |        |                   |
| 41                 | / V //C                         | ~]          | $\times \smile$ |   |                              |                       | 1 4 1 1 1 1 1 1  | ·uunc                | · ~ / T * 1 \  |                     | , , -     |                         | _                   |           |                           |        |                   |

madison-kipp/WI001283/graphics/logs/mv/21d.ai

|  |   |             | <u>F</u>       | Route to: Watershed/Wastewater Remediation/Redevelopment 🗵                                  | Waste I<br>Other          |          | ement 🗌        | l               |              |                         |                     |                 |                  |          |                   |
|--|---|-------------|----------------|---|---------------------------|----------|----------------|-----------------|--------------|-------------------------|---------------------|-----------------|------------------|----------|-------------------|
|  |   |             |                |   |                           |          |                |                 |              | ====0,                  |                     | F               | age              | 1        | of 3              |
| Facility   | /Project N  | lame        | _              |   | Licen                     | se/Per   | mit/Moni       | toring N        | lumber       |                         | Во                  |                 | lumber           |          | · · ·             |
|  |   |             | Kipp,          | /WI001283.0009.00009  |                           |          |                |                 |              | -                       |                     |                 | M                | W-2      | 2 <b>2S</b> /22D  |
| Boring   | Drilled By  | :Name o     | f crew         | chief (first, last) and Firm  |                           | Drilling | Started        |                 | Date D       | Orilling C              | omple               | ed              | Drilling         | ) Met    | hod               |
|  | <sub>sme</sub> Ra<br>Boart L                      |             |                | Last Name Radke/Schmelfeld  | t                         | 01/0     | 4/13           |                 | 0            | 1/04/                   | 13                  |                 | Mi               | ini S    | onic              |
|  | que Well î  |             |                | DNR Well ID No. Well Name MW-22S/22[  |                           |          | Water Le       | : 1             | _87          | e Elevati<br>74,45      | Feet                | MSL             | Boreh<br>8.      |          | iameter<br>inches |
| Local G  | rid Origin  | <u> </u>    | estimat        | ted: ☐ ) or Boring Location ☐<br>N, <u>2144125.28</u> E S☐/C☐/N                             | ı 🗆 ı -                   |          |                |                 | Local G      | irid Loca               |                     |                 |                  |          |                   |
| State F  |   |             |                |   | IEI.                      |          |                | <del></del>     |              | _                       |                     |                 |                  |          | □E                |
| Facility   | _ 1/4 of .  |             |                | Section,TN,RCounty  | W Long                    |          | Civil Town     | (/City/lo       | r\/illage    |                         | et 🛘                | <u>s</u> _      |                  | _        | Feet W            |
| -  | 31253   | 20          |                | Dane1   |                           |          | CIVII 10WI     | Mad             |              | =                       |                     |                 |                  |          |                   |
|  | nple  |             |                |   |                           |          |                |                 |              |                         | Soil P              | rope            | rties            |          |                   |
| 3411   | <del>i                                     </del> |             |                |   |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
| Number and Type Length All. & Recovered (in) Blow Counts Blow Counts Blow Counts Blow Counts Blow Counts Counts Counts Depth in Feet Counts Counts Depth in Feet Counts Counts Diagram Diagram Counts Diagram Counts Diagram Diagram Diagram Counts Diagram Diag |   |             |                |   |                           |          |                |                 | sive         |                         |                     |                 |                  | . sts    |                   |
| ype  | h Al  | On          | ië             | Each Major Unit   |                           |          | )<br>일         | a               | ا ۾          | ores<br>gth             | ture                | Б               | <u>u</u>         | 0        | ner               |
| Number<br>and Type   | eco.  | Blow Counts | ept            |   |                           | USCS     | Graphic<br>Log | Well<br>Diagram | PID)FID      | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200    | RQD/<br>Comments  |
|  |   | α.          | 0              | 0-4.0′/   |                           | Fill     |                | > 0             | 0-2          | 0 8                     | 20                  |                 |                  | Δ.       | 20                |
| 1  | 36  |             | ĻŤ             | 0.0-0.7' Concrete: 8"thick-16" borehole th  | rough                     | GW       |                |                 | 23.5         |                         |                     |                 |                  |          |                   |
|  |   |             | -              | floor.  | _                         | ""       |                |                 |              |                         |                     |                 |                  |          |                   |
| - 0  |   |             | L              | 0.7-3.4' Pulverized dolostone.  |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
| 19   |   |             | L              | 3.4-4.0' Clay: Little silt, trace very fine sand gravel, 1/8", subangular to subround, mois |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
| - 10   |   |             | _<br>_2        | plasticity, soft, strong odor, black and gree   |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
| - 1  |   |             | Ľ              | streaks, dark greenish gray (Gley 4/1).   |                           |          |                |                 | 2-4<br>60.4  |                         |                     |                 |                  |          |                   |
|  |   |             |                |   |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
| - 1  |   |             | Г              |   |                           | ر ا      | "              |                 |              |                         |                     |                 |                  |          |                   |
| - 1  |   |             |                |   |                           | CH       |                |                 |              |                         |                     |                 |                  |          |                   |
|  |   |             | Γ.             |   |                           |          | ////           |                 |              |                         |                     |                 |                  | İ        |                   |
| 2  | 60  |             | <del> </del> 4 | 4.0-9.0′/   |                           | СН       | ////           |                 | 4-6          |                         |                     |                 |                  |          |                   |
|  |   |             | <u> </u>       | 4.0-6.6' Clay: Little silt, trace very fine sand  |                           |          | ////.          |                 | 13.2         |                         |                     |                 |                  |          |                   |
|  |   |             | $\vdash$       | gravel, 1/8", subangular to subround, mois  |                           |          |                |                 |              |                         |                     |                 |                  |          |                   |
|  |   |             | -              | plasticity, soft, strong odor, black and gree<br>streaks, dark greenish gray (Gley 4/1).    | en                        |          |                |                 |              |                         |                     |                 |                  |          |                   |
| - 1  |   |             | ┝              | Note: Trace 1/8-1" pieces of crumbly vesic  | ular slag                 |          |                |                 |              |                         |                     |                 |                  |          |                   |
|  |   |             | -6             | through.  | g                         | 1        |                |                 | 6-8          |                         |                     |                 |                  |          |                   |
| W  |   |             | F              | 6.6-7.4' Sand: Very fine to medium graine   |                           | sw       | (              |                 | 33.4         |                         |                     |                 |                  |          |                   |
|  |   |             | L              | very fine, subangular to subround, little si  |                           | 3**      |                |                 |              |                         |                     |                 |                  | - 5      |                   |
|  |   |             | L              | gravel, 1/8-1", mainly 1/8-1/2", subangular round, poorly sorted, dry to moist, loose, s    |                           | СН       | ////           |                 | 1            |                         |                     | Ì               |                  |          |                   |
|  |   |             | L              | odor, black streaks and 1/8-1" pieces of cr   |                           |          |                |                 | 1            |                         |                     |                 |                  |          |                   |
|  |   |             | -8             | slag through out, yellowish brown (10 YR  |                           | SW       | ////           |                 | 8-9          |                         |                     |                 |                  |          |                   |
| ĺ  |   |             | l°             | 7.4-8.4' Clay: Little silt, trace very fine sand  |                           | 1        |                |                 | 22.1         |                         |                     |                 |                  |          |                   |
|  |   |             | Γ              | gravel, 1/8", subangular to subround, mois plasticity, soft, strong odor, black and gree    |                           | 1        |                |                 |              |                         |                     |                 |                  |          |                   |
| 2-1  | 60  |             | F              | streaks, dark greenish gray (Gley 4/1).   | ſ                         | C        | 7777           |                 |              |                         | -                   |                 | <del> </del>     | $\vdash$ |                   |
| 3  | 60  |             | Γ              | Note: Trace 1/8-1" pieces of crumbly vesic  | ular slad                 | CH       | <b>////</b>    |                 | 9-10<br>19.8 |                         |                     |                 |                  |          |                   |
| N/   |   |             | <b> </b>       | through.  | احتممام                   | , GW     | 1111           |                 | 17.0         |                         |                     |                 |                  |          |                   |
| V  |   |             | 10             | 8.4-9.0' Sand: Very fine to medium graine very fine, subangular to subround, little si      | :u, maini)<br>ilt. little | ′  ```   |                |                 | 10-12        |                         |                     |                 |                  |          |                   |
|  |   |             | <u> </u>       | gravel, 1/8-1" mainly 1/8-1/2" subangular   | to sub-                   | <u>L</u> | Α Α            |                 | 17.2         |                         |                     |                 |                  | Ĺ.,      | <u> </u>          |
| l here   | oy certif   | y that th   | ne info        | rmation on this form is true and correct to   | the best                  |          |                | dge.            |              |                         |                     |                 |                  |          |                   |
| Signat   | ure<br>つ  | 1           | 2              |   | 7111                      | ADIS     | ferson '       | St Sui          | te 400       | 1                       |                     |                 |                  |          |                   |

| Boring N           |                                 |             |                          | 5/22D   |          | Γ              | _               |                               |                         | Soil D              | roperti         | Page _           |        |     | =   |
|--------------------|---------------------------------|-------------|--------------------------|---|----------|----------------|-----------------|-------------------------------|-------------------------|---------------------|-----------------|------------------|--------|-----|-----|
| Sam                |                                 |             |                          |   |          |                |                 |                               |                         | 3011 F              | Гореги          | E2               | $\Box$ |     |     |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS     | Graphic<br>Log | Well<br>Diagram | PID/FID                       | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200  | , i | 200 |
| Zira               | <u>~</u>                        |             | -                        | round, poorly sorted, dry to moist, loose, strong odor, black streaks and 1/8-1" pieces of crumbly slag throughout, yellowish brown (10 YR 5/8).  | SW<br>SW |                |                 | 12-14<br>12.8                 | 0 01                    |                     |                 |                  |        |     |     |
|                    |                                 |             | -<br>-12<br>-            | 9.0-14'/ 9.0-9.6' Clay: Little silt, trace very fine sand, trace gravel, 1/8", subangular to subround, moist, high plasticity, soft, strong odor, black and green streaks, dark greenish gray (Gley 4/1). 9.6-10.5' Pulverized Dolostone. 10.5-10.9' Sand: Very fine to medium grained,   | MH       |                |                 |                               | ·                       |                     |                 |                  |        |     |     |
|                    |                                 |             | 14                       | mainly very fine to fine, subangular to subround,<br>Hittle silt, little gravel, 1/8-1/2", angular, trace   |          |                |                 | 14-16                         |                         |                     |                 | _                |        |     |     |
| 4                  | 60                              |             | -<br> -<br> -            | organics (roots and wood pieces), poorly sorted,<br>moist, loose, slight odor, dark yellowish brown<br>(10 YR 4/4).<br>10.9-12.3' Sand: Very fine to medium grained,<br>mainly very fine to fine, subangular to subround  | ML       |                |                 | 17.5                          | :                       |                     |                 |                  |        | :   |     |
| 7                  |                                 | :           | -16<br>-<br>-<br>-       | littel silt, little to some gravel, 1/8-3", mainly 1/8-3/4", subangular to subround, poorly sorted, loose dry, no odor, yellowish brown (10 YR 5/8). 12.3-12.9' Silt: Some very fine to fine grained sand, subangular to subround, little clay, trace gravel, 1/8", subangular to subround, low to medium plasticity, moist to dry, soft, slight odor,    |          |                |                 | 16-18<br>11.4                 |                         |                     |                 |                  |        |     |     |
|                    |                                 |             | - 18<br>-                | dark grayish brown (10 YR 4/2). 12.9-14.0' Sand: Very fine to medium grained, mainly very fine to fine, subangular to subround littel silt, little to some gravel, 1/8-3", mainly 1/8- 3/4", subangular to subround, poorly sorted, loose   |          |                |                 | 18-19<br>4.0                  |                         |                     | i               |                  |        |     |     |
| 5                  | 60                              |             | -<br>-<br>-20            | dry, no odor, yellowish brown (10 YR 5/8).  14-19'  14-19' Silt: Little clay, some sand, very fine to fine, subangular to subround, little gravel, 1/8-4",  | ML       |                |                 | 19-20<br>7.8<br>20-22<br>5.0  |                         |                     |                 |                  |        |     |     |
|                    |                                 |             |                          | mainly 1/8-3/4", subangular to subround, trace organic carbon, silt partings throughout, low to medium plasticity, moist, medium stiff to stiff, no pdor, yellowish brown (10 YR 5/4).  | ML       |                |                 |                               |                         |                     |                 |                  |        |     |     |
|                    |                                 |             | - 22<br>-<br>-<br>-<br>- | 19-24'/ 19-20.4' Silt: Little clay, some sand, very fine to fine, subangular to subround, little gravel, 1/8-4", mainly 1/8-3/4", subangular to subround, trace organic carbon, silt partings throughout, low to medium plasticity, moist, medium stiff to stiff, no odor, yellowish brown (10 YR 5/4). 20.4-22.1' Silt: Some gravel, 1/8-4", mainly 1/8- | МН       |                |                 | 22-24                         |                         |                     |                 |                  |        |     |     |
| 6                  | 60                              |             | - 26                     | 1/2", subangular to subround, little very fine to fine sand, low plasticity, dry, loose, very pale brown (10 YR 7/4).  22.1-24' Silt: Little clay, little very fine sand, trace gravel, 1/8", subangular to subround, medium plasticity, moist, soft, no odor, brownish yellow (10 YR 6/6).   | ML       |                |                 | 24-26<br>6.4<br>26-28<br>17.4 | 8                       |                     |                 |                  |        |     |     |
| دار کا طبیع        |                                 |             | -                        | 24-297 24-29' Silt: Little clay, little sand, very fine to fine grained, subangular to subround, some gravel, 1/8-3", mainly 1/8-1/2", subangular to subround, low plasticity, moist, hard (HP >5.0), no odor, brownish yellow (10 YR 6/6).   |          |                |                 | 28-29<br>15.6                 |                         |                     |                 |                  |        |     |     |

| Boring Number   | MW-225                               | 5/22D   |          |                |                 |                                  |                         |                     | 1               | oage _           | 3     | of <u>3</u>      |
|---|--------------------------------------|---|----------|----------------|-----------------|----------------------------------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sample  |                                      |   |          |                |                 |                                  |                         | Soil Pr             | operti          | 25               |       |                  |
| Number<br>and Type<br>Length All. &<br>Recovered (in) | Blow Counts<br>Depth in Feet         | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS     | Graphic<br>Log | Well<br>Diagram | PIDJFID                          | Compressive<br>Strength | Moisture<br>Content | Líquid<br>Límit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
| 7 60  | -<br>-<br>-                          | 29-34"/ 29-30.8' Silt: Little clay, little sand, very fine to fine grained, subangular to subround, some gravel, 1/8-3", mainly 1/8-1/2", subangular to subround, low plasticity, moist, hard (HP >5.0), no odor, brownish yellow (10 YR 6/6). Note: Wet at 30'. 30.8-32.4' Sand: Very fine to medium grained, mainly very fine to fine, subangular to subround, little to some silt, little gravel, 1/8-2", mainly 1/8-3/4", subangular to subround, poorly sorted, wet, loose, no odor, light yellowish brown (10 YR 6/4). 32.4-33.0' Silt: Little clay, little sand, very fine to fine grained, subangular to subround, some gravel, 1/8-3", mainly 1/8-1/2", subangular to subround, low plasticity, moist, hard (HP >5.0), no odor, brownish yellow (10 YR 6/6). 33.0-34.0' Sand: Very fine to medium grained, | ML<br>SW |                |                 | 29-<br>30<br>6.9<br>30-32<br>0.9 |                         |                     |                 |                  |       |                  |
| 8 48  | - 34<br>                             | mainly very fine to fine, subangular to subround, little to some silt, little gravel, 1/8-3", mainly 1/8-3/4", subangular to subround, trace clay, poorly sorted, wet, loose, no odor, light yellowish brown (10 YR 6/4).  34-39'/  34.0-36.5' Sand: Very fine to medium grained, mainly very fine to fine, subangular to subround, little to some silt, little gravel, 1/8-3", mainly 1/8-3/4", subangular to subround, trace clay, poorly sorted, wet, loose, no odor, light yellowish brown (10 YR 6/4).  36.5-38' Weathered bedrock.  38.0-50.0' Blind drill.   | GW       |                |                 | 34-36<br>20.8<br>36-38<br>15.7   |                         |                     |                 |                  |       |                  |
|   | - 40<br>- 42<br>- 42<br>- 44<br>- 46 | End of Logging @ 38' Bedrock @ 36.5 EOB @ 50'   |          |                |                 |                                  |                         |                     |                 |                  |       |                  |

|   |   |                           | <u>R</u>       | Route to: Watershed/Wastewater  Remediation/Redevelopment                         |            | aste M<br>ther |         | ment 🔲             |                 |              |                         |                     |          |             |                |                  |
|---|---|---------------------------|----------------|---|------------|----------------|---------|--------------------|-----------------|--------------|-------------------------|---------------------|----------|-------------|----------------|------------------|
|   |   |                           |                |   |            |                |         |                    |                 |              |                         |                     | Р        | age         | 1              | of3_             |
| - 111. 0                                | 5 - 14 N                                      |                           |                |   |            | Licens         | e/Perr  | nit/Monit          | torina N        | umber        | _                       | Во                  | ring N   |             |                |                  |
| Facility/                               | Mad.  | <sub>ame</sub><br>lis∩n-k | (inn/          | /WI001283.0009.00009  |            |                |         |                    |                 |              |                         |                     | Ń۷       | V-23        | 5/23           | 3D               |
| Boring [                                |   |                           |                | chief (first, last) and Firm  |            | Date D         | rilling | Started            |                 | Date D       | rilling Co              | omplet              |          | Drilling    |                |                  |
| _                                       | <sub>me</sub> Rar                             |                           |                | Last Name Radke/Schmelfe  | eldt       |                |         | 2/13               |                 | ^            | 1 /02 /                 | 1 2                 | l        | NA:         | nica           | onic             |
| First Na                                | me Nai<br>Boart L                             | onav                      | ear            | Eddt Harrie 1985  |            |                | 71/0.   | 2/13               |                 | U            | 1/03/                   | 13                  | - 1      | WII         | HISC           | лис<br>          |
|   | ue Well N                                     |                           | T              | DNR Well ID No. Well Name   |            | Final          | Static  | Water Le           | vel             | Surface      | Elevation               | on                  |          |             |                | ameter           |
| *************************************** | <b>44</b> • • • • • • • • • • • • • • • • • • |                           |                | MW-235/2  | 23D        |                |         | Feet               |                 |              | <u>4.55</u>             |                     | MSL      | <u>8.</u>   | 0              | in <u>ches</u>   |
| Local Gr                                | id Origin                                     | <b>X</b> (6               | estimat        | ted: 🔲 ) or Boring Location 🔲   |            |                |         |                    |                 | Local G      | rid Locat               |                     |          |             |                |                  |
| State P                                 | lane <u>39</u>                                | <u> 99647</u>             | .46            | N, <u>_2144053.72</u> E s□/cI   |            | Lat            |         |                    |                 |              |                         |                     |          |             |                | □□               |
|   | 1/4 of .                                      |                           | 1/4 of         | f Section,TN,R  | _          | Long           |         |                    | اجح             |              |                         | et 🔲                | 5 _      | _           |                | Feet W_          |
| Facility I                              | D   |                           |                |   | inty Code  | e              | - 1     | Civil Towr         |                 |              | !                       |                     |          |             |                |                  |
| 11                                      | 312 <u>5</u> 3                                | 20_                       |                | Dane  | 13         |                | L       |                    | Mad             | ison         |                         | - 11 -              |          |             |                |                  |
| Sam                                     | ple   |                           |                |   |            |                |         | 1                  |                 |              |                         | Soil P              | ropei    | ties        |                |                  |
|   |   |                           |                | Soil/Rock Description   |            | ŀ              |         |                    |                 |              | ē                       |                     | i        |             |                |                  |
|   | 1.8.<br>d (in                                 | nts                       | Fe             | And Geologic Origin For   |            | - 1            |         | 1 1                |                 | ]            | ssiv                    | ا به                |          |             |                | ints             |
| ype y                                   | h A   | 05                        | <u>=</u>       | Each Major Unit   |            | l              |         | [윤 ]               | ram             | 문 '          | pre<br>ngtl             | tur                 | ᇽ        | ب ڍ         | 200            | > ਵ              |
| Number<br>and Type                      | Length All.&<br>Recovered (in)                | Blow Counts               | Depth in Feet  |   |            | - 1            | USCS    | Graphic<br>Log     | Well<br>Diagram | (PID)FID     | Compressive<br>Strength | Moisture<br>Content | in ig    | las.<br>imi | P 2(           | RQD/<br>Comments |
| 1000                                    |   | - 8                       | 0              | 0-5.0′/   | _          |                | Fill    |                    |                 | 0-2          | 0 %                     | 20                  |          |             |                |                  |
| 1                                       | 51.6  |                           | L"             | 0.0-0.7' Concrete: 8"thick-14" boreho   | le throu   | ıgh            |         | $\times$           |                 | 1.1          |                         |                     |          |             |                |                  |
|   |   |                           | L              | floor.  |            |                | мн      |                    |                 |              |                         |                     | '        | '           |                |                  |
|   |   |                           |                | 0.7-2.0' Silt: Little clay, trace very fine                                       | sand, tra  | ace            |         |                    |                 |              |                         |                     |          |             |                |                  |
|   |   |                           | Γ              | organic carbon, trace gravel, 1/16-1/8  |            |                |         | 111111             |                 |              |                         |                     |          |             |                |                  |
| 100                                     |   | 1                         | <b>T</b>       | medium plasticity, moist, hard (HP >5 dark yellowish brown (10 YR 4/4).           | s.0), no c | odor,          |         |                    |                 | 2-4          |                         |                     |          | '           |                |                  |
|   |   |                           | -2             | 2.0-4.0' Silt: Little clay, little to some s                                      | and, ver   | rv             |         | 111111             |                 | 1.1          |                         |                     |          |             |                |                  |
| - 12                                    |   |                           | -              | fine to fine grained, little gravel, 1/8-2  |            |                | МН      | 111111             |                 | 1            |                         |                     |          |             |                |                  |
| - 10                                    |   | İ                         | L              | 1/8-1/4", angular, silt partings through  | nout, ab   | un-            |         | шш                 |                 |              |                         | 1                   |          |             |                |                  |
| - 1                                     |   |                           | L              | dant very fine euhedral pyrite throug   | ghout,     |                |         | ШШ                 |                 | 1            |                         |                     |          |             |                |                  |
| - 1                                     |   |                           |                | medium plasticity, moist, soft (HP = 1  | .5), no o  | dor,           |         | шш                 |                 |              |                         |                     |          |             |                |                  |
| - 1                                     |   |                           | 1              | dark yellowish brown (10 YR 4/4).<br>4.0-5.0' Silt: Little clay, little to some s | and ve     | rv.            | MH      |                    |                 |              |                         | 1                   | 1        |             |                |                  |
| - 1                                     |   |                           | <del>-</del> 4 | fine to fine grained, little gravel, 1/8-2  |            |                |         |                    |                 | 4-6          |                         |                     |          | 1           |                |                  |
|   | 1   |                           | <b>T</b>       | 1/8-1/4", angular, silt partings through  |            |                |         | Ш                  |                 | 2.0          |                         |                     |          |             |                |                  |
|   |   |                           | 上              | dant very fine euhedral pyrite through  | ghout,     | _              |         | ╀╬╂┇╂              |                 | -            |                         | -                   | <u> </u> |             | <del> </del> — |                  |
| 2                                       | 48  |                           | -              | medium plasticity, moist, soft (HP = 1  | 1.5), no c | odor,          | МН      |                    |                 | 1            |                         |                     |          | 1           |                |                  |
| - 1                                     | ı   |                           | -              | dark yellowish brown (10 YR 4/4).   |            |                | sw      | HIII.              |                 | -            |                         |                     |          |             | Į.             |                  |
|   | 11  | 1                         | -6             | 5.0-9.0'/<br>5.0-6.0' Silt: Little clay, little to some s                         | -204.10    | rs r           | 244     |                    |                 | 6-8          |                         | 1                   |          |             |                |                  |
|   |   |                           | L              | fine to fine grained, little gravel, 1/8-2  |            |                | 1       |                    |                 | 1.8          | 1                       |                     |          |             |                |                  |
|   |   | •                         |                | 1/8-1/4", angular, silt partings through  |            |                | l       |                    |                 |              |                         |                     |          |             |                |                  |
|   |   |                           |                | dant very fine euhedral pyrite through  | ghout,     |                |         |                    | 1               |              |                         |                     |          |             |                |                  |
|   |   |                           | -              | abundant 1/16" angular gravel fill thr  | roughou    | ut,            |         |                    | }               |              |                         |                     |          |             |                |                  |
|   |   | İ                         | r              | loose, 1" angular aluminum flakes, me   | edium      |                |         |                    |                 |              |                         |                     |          |             |                |                  |
| - 1                                     |   |                           | -8             | plasticity, moist, soft (HP = 1.5), no od   | dor, dark  | (              | 1       |                    |                 | 8-10<br>1.7  |                         |                     |          |             | 1              |                  |
|   | 1   | 1                         | $\vdash$       | yellowish brown (10 YR 4/4).<br>6.0-9.0' Sand: Very fine to medium gi             | rained r   | mainly         |         |                    | }               | 1.7          |                         |                     |          |             |                |                  |
|   |   |                           | $\vdash$       | very fine, subangular to subround, lit  |            |                |         |                    | 1               |              |                         | 1                   |          | L.          |                |                  |
| 3                                       | 36  | +-                        | 1              | to little gravel, 1/8-3-1/4", mainly 1/8  |            |                | SW      |                    |                 |              | 1                       | $T^-$               |          |             |                |                  |
| 7                                       |   |                           |                | angular to subround, poorly sorted, o   | dry, loos  | e, no          |         |                    | 1               |              |                         |                     |          |             |                |                  |
| 19                                      | 1   |                           |                | odor, yellowish brown (10 YR 5/8).  |            |                | CL      | iai iai i          |                 |              |                         | 1                   |          |             |                |                  |
| V                                       |   |                           | 10             | 12.0 127  |            |                |         | TALLALI<br>TALLALI | å               | 10-12<br>5.5 | 2                       |                     | 1        | 1           |                |                  |
| 1                                       |   |                           |                | 9.0-9.8' Sand: Very fine to medium g  |            |                |         |                    |                 | 3.5          | <u>L</u> .              |                     | Ш.       |             |                | <u> </u>         |
|   |   | fy that t                 | he info        | ormation on this form is true and corre   | ect to th  | e best         | of m    | y knowle           | eage            |              |                         |                     |          |             |                |                  |
| Signa                                   | ture  |                           | - 1            | A   | 11.00      | ARC            | _AUI    | )                  |                 |              |                         |                     |          |             |                |                  |

Signature

| Boring Number   | MW-239                             | 5/23D   |                |                |                 |                              |                         |                     | F               | Page _           | 2     | of <u>3</u>      |
|---|------------------------------------|---|----------------|----------------|-----------------|------------------------------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sample  |                                    |   |                |                |                 |                              |                         | Soil Pr             | operti          | 25               |       |                  |
| Number<br>and Type<br>Length Ail. &<br>Recovered (in) | Blow Counts<br>Depth in Feet       | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS           | Graphic<br>Log | Well<br>Diagram | PID(FID)                     | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|   | - 12                               | very fine, subangular to subround, little silt, trace to little gravel, 1/8-3-1/4", mainly 1/8-3/4", subangular to subround, poorly sorted, dry, loose, no odor, yellowish brown (10 YR 5/8).  9.8-9.9' Clay: Little silt, trace very fine to fine  | SW             |                |                 | 12.14                        |                         |                     |                 | 1                |       | 4                |
| 4 60  | - 14                               | grained sand, trace 1/8" gravel, subangular, low plasticity, moist, hard, no odor, very dark grayish brown (10 YR 3/2). 9.9-10.2' Pulverized dolostone. 10.2-10.9' Sand: Very fine to medium grained, mainly very fine, subangular to subround, little silt, trace to little gravel 1/8-4", mainly 1/8-3/4",  | SW<br>GW<br>SW |                |                 | 1.3                          |                         |                     |                 |                  |       |                  |
| 5 60  | - 16<br>18                         | subangular to subround, poorly sorted, dry, loose, no odor, yellowish brown (10 YR 5/8). 10.9-12.' Sand: Very fine to medium grained, mainly very fine subangular to subround, little silt, little to some gravel 1/8-4", mainly 1/8-3/4", subangular to subround, poorly sorted, dry, loose, no odor, light yellowish brown (10 YR 6/4) from 10.9-11.2' and brownish yellow (10 YR 6/8) from 11.2-12.0'. 12-14'/ 12-12.7' Sand: Very fine to medium grained, mainly very fine, subangular to subround, little silt, little to some gravel 1/8-4", mainly 1/8-3/4", subangular to subround, poorly sorted, dry, loose, no odor, yellowish brown (10 YR 5/8). 12.7-13.6' Pulverized Dolostone. | SW             |                |                 | 14-16<br>1.6<br>16-18<br>0.8 |                         |                     |                 |                  |       |                  |
| 6 24  | -<br>-20<br>-<br>-<br>-<br>-<br>22 | loose, no odor, yellowish brown (10 YR 5/8).  14-19'/ 14-19' Sand: Very fine to medium grained, mainly very fine, subangular to subround, little silt, some gravel, 1/8-4", mainly 1/8-3/4", subangular to subround, poorly sorted, dry, loose, no odor, yellowish brown (10 YR 5/8).  19-24'/ 19-19.8' Sand: Very fine to medium grained, mainly very fine, subangular to subround, little silt, some gravel, 1/8-4", mainly 1/8-3/4", sub- angular to subround, poorly sorted, dry, loose,  | ML             |                |                 | 19-20<br>3.3<br>20-22<br>4.8 |                         |                     |                 |                  | F .   |                  |
| 7 60<br>8 48  | 26                                 | 19.8-24' Silt: Little clay, little sand, very fine to fine, subangular to subround, little gravel, 1/8-2", mainly 1/8-1/2", subangular to subround, silt partings throughout, low plasticity, moist, hard (HP >5.0), no odor, brownish yellow (10 YR 6/6).  | ML<br>MH<br>ML |                |                 | 24-26<br>11.2                |                         |                     |                 |                  |       |                  |
| madison-kipp/milv                                     | - 28<br>- 28<br>- 28<br>- 28       | 1/8-3", mainly 1/4-3/4", subangular to subround, low to medium plasticity, moist, stiff, no odor, brownish yellow (10 YR 6/6). 24.9-25.3' Silt: Some sand, very fine grained, trace   |                |                |                 | 28-3<br>4.2                  | o                       |                     |                 |                  |       |                  |

| Boring N<br>Sam    |              |             | 1                               | 5/23D   |      |                |                 |                              |                         | Soil P              | operti          | Page _ |       | • |
|--------------------|--------------|-------------|---------------------------------|---|------|----------------|-----------------|------------------------------|-------------------------|---------------------|-----------------|--------|-------|---|
| Number<br>and Type | Length All.& | Blow Counts | Depth in Feet                   | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | PID(FID)                     | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit |        | P 200 |   |
|                    |              |             | -<br>-<br>-30<br>-              | fine grained, subangular to subround, little gravel, 1/8-3", mainly 1/4-3/4", subangular to subround, low to medium plasticity, moist, stiff, no odor, brownish yellow (10 YR 6/6).  26-31'/ 26.0-31.0'Silt: Little clay, some sand, very fine to fine grained, subangular to subround, little gravel, 1/8-3", mainly 1/4-3/4", subangular to subround, | ML   |                |                 | 30-31<br>1.8                 |                         |                     |                 |        |       |   |
| 3                  | 48           |             | - 32<br>- 32<br>34<br>34        | low to medium plasticity, moist, stiff, no odor, brownish yellow (10 YR 6/6).  Note: Wet at 30'.  31-35'/ 31.0-35.0' Sand: Fine to medium grained, subangular to suborund, little silt, little gravel, 1/8-3", mainly 1/4-3/4", subangular to subround, trace clay, poorly sorted, wet, medium dense, no odor, dark yellowish brown (10 YR 4/6).        | SW   |                |                 | 31-33<br>6.4<br>33-35<br>2.1 |                         |                     |                 |        |       |   |
|                    | 24           |             | - 36<br>                        | 35-37'/ 35.0-36.0' Sand: Fine to medium grained, subangular to suborund, little silt, some gravel with weathered bedrock, 1/8-3", mainly 1/4-3/4", subangular to subround, trace clay, poorly sorted, wet, medium dense, no odor, dark yellowish brown (10 YR 4/6). 36.0-37.0' Weathered and fractured bedrock. 37.0-50.0' Blind drill.                 | SW   |                |                 | 35-37<br>14.9                |                         |                     |                 |        |       |   |
| •                  |              |             | - 40<br>42<br>44                | End of Logging @ 37' Bedrock @ 36.0 EOB @ 50'   |      |                |                 |                              |                         |                     |                 |        |       |   |
|                    |              |             | -<br>-<br>-<br>-<br>-<br>-<br>- |   |      |                |                 |                              |                         |                     |                 |        |       |   |

State of Wisconsin SOIL BORING LOG INFORMATION Department of Natural Resources Form 4400-122 Route To: ■ Haz. Waste ■ Solid Waste Underground Tanks ■ Wastewater ■ Water Resources ■ Emergency Response Page 1 of 3 Other \_ License/Permit/Monitoring Number Boring Number Facility / Project Name Madison-Kipp Corporation Boring Drilled By (Firm name and name of crew chief) Date Drilling Started **Date Drilling Completed Drilling Method** 28 13 28 Alex Plummer - Badger State Drilling Hollow stem auger ΥΥ D D MMWI Unique Well No. Common Well Name Final Static Water Level Surface Elevation Borehole Diameter DNR Facility Well No. Feet MSL Feet MSL Local Grid Location (If Applicable) **Boring Location** Lat State Plane □ E  $\square$  N 10 <sub>E</sub> Feet Feet 1/4 of Section □ S  $\square$  W **DNR County Code** Civil Town / City / or Village Dane City of Madison 3 Sample Soil Properties ROD/Comments Blow Counts (N) Well Diagram Recovered (N) Standard Penetration in Feet Soil/Rock Description Moisture Content PID/FID And Geologic Origin For USCS P 200 Liquid Limit Depth i **Each Major Unit** Fill GRAVEL, brown, some sand GP 30 4 Same SAND, fine-grained, brown 10 SM 16 SILT, clayey, dark brown >100 Same 8

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Kohn- Auto Firm RJN Environmental Services, LLC, Oregon, WI

>100

29

16

12

SAND, fine- to medium-grained,

some silt, brown

## SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A 7-91

|        | ng Num                  |                 | MW-2                         |   | Form | 4400·       | -122A        | ı       |                         |                     | В               | age <u>2</u>     | ) <sub>of</sub> | 7-91         |
|--------|-------------------------|-----------------|------------------------------|---|------|-------------|--------------|---------|-------------------------|---------------------|-----------------|------------------|-----------------|--------------|
| Sam    | nle                     | _               |                              |   |      |             |              |         |                         | Soil Pro            |                 |                  | 01              |              |
| Number | Length<br>Recovered (N) | Blow Counts (N) | Depth in Feet                | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | nscs | Graphic Log | Well Diagram | PID/FID | Standard<br>Penetration | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200           | ROD/Comments |
|        | 8                       | 64              | £                            | Same  | SM   |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 15<br>-<br>-<br>16           |   | O.V. |             |              |         |                         |                     |                 |                  |                 |              |
|        | 17                      | 41              | 17                           | Same, some sandstone chips  | SM   |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 18                           |   |      | 33333       |              |         |                         |                     |                 |                  |                 |              |
|        | 21                      | 43              | 19                           | Same  | SM   |             |              |         |                         |                     |                 |                  |                 |              |
|        | 14                      | >100            | 20                           | Same  | SM   |             |              |         |                         |                     |                 |                  |                 |              |
|        | 0                       | >100            | 22<br>-<br>-<br>-<br>-<br>23 |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        | 0                       | >100            |                              |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 26                           | Bedrock drilling  |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 27<br>-<br>-<br>-<br>28      |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 29                           |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 30                           |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 32                           |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 33                           |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 | 35                           |   |      |             |              |         |                         |                     |                 |                  |                 |              |
|        |                         |                 |                              |   |      |             |              |         |                         |                     |                 |                  |                 |              |

## SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A 7-91

MW-24 3\_ of \_ Boring Number Page \_ Sample Soil Properties ROD/Comments Blow Counts (N) Well Diagram Depth in Feet Graphic Log Standard Penetration Length Recovered ( **Soil/Rock Description** Moisture Content PID/FID Number **And Geologic Origin For** Liquid Limit Plastic Limit P 200 **Each Major Unit** 37 38 39 Bedrock drilling 40 42 43 End of boring at 43 feet 45 46 47 48 49 50 51 52 53 55 58

State of Wisconsin Department of Natural Resources SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

|  |  |       | Route T                    | o: Watershed/V   |        | _        | _        | aste Ma     | _            | nent     | ]                       |                     |                 |                     |         |                  |
|--|--|-------|----------------------------|------------------|--------|----------|----------|-------------|--------------|----------|-------------------------|---------------------|-----------------|---------------------|---------|------------------|
|  |  |       |                            | Remediation      | /Rede  | velopm   | nent 🔀   | Othe        | r            |          |                         |                     |                 | Pa                  | ge 1 of | 1                |
| Facility/Project                                     | Name   |       |                            |                  | L      | icense/  | Permit   | Monito:     | ring N       | umber    |                         | E                   | oring N         | umber               |         |                  |
| Madison-K  | Cipp C   | Corp  | ooration                   |                  |        |          |          |             |              |          |                         | I                   | ЛW-2            | 5D                  |         |                  |
| Boring Drilled l                                     |  |       |                            |                  | D      | ate Dri  | illing S | tarted      |              | Date I   | Drilling                | Comp                | leted           | Drill               | ing Me  | thod             |
| First Name: Tirm:                                    |  |       | Last Name: S               | Schmelfeldt      | 4      | /4/20    | 013      |             |              | 4/19     | )/2013                  | 3                   |                 | Mu                  | d Ro    | tary             |
| WI Unique Wel  | ll No.   | DN    | R Well ID No.              | Well Name        | Fi     | inal Sta | atic Wa  | ter Leve    | el .         | Surfac   | ce Eleva                | ation               |                 | Bore                | hole Di | ameter           |
| VN190  |  |       |                            | MW-25D           | 84     | 5.43F    | eet MS   | L           |              | 886.9    | <b>7</b> Feet 1         | MSL                 |                 | 12" t               | o 53',  | 8" to 230'       |
| Local Grid Orig                                      | gin  | (esti | mated: ) or                | Boring Location  |        |          |          |             |              | Local    | Grid Lo                 | ocation             | 1               |                     |         |                  |
| State Plane 398                                      | 8730.9   | 9     | N <u>2144829</u>           | <u>0.8</u> E     |        | Lat      | t        |             |              |          |                         | N                   |                 |                     | E       |                  |
|  | of Secti   | ion   | , T N, R                   |                  |        | Long     |          |             |              |          | Feet [                  | S                   | Fe              | et 🗌                | W       |                  |
| Facility ID  | _  |       | County                     |                  |        | ty Code  | e        |             |              | City/or  | Village                 | ;                   |                 |                     |         |                  |
| 113125320  | )  |       | Dane                       |                  | 13     |          |          | Mac         | disor        | <u> </u> |                         |                     | C - :1 D        |                     |         |                  |
| Sample   |  |       |                            |                  |        | _        |          |             |              | Soil Pr  | operties                | ·<br>               |                 |                     |         |                  |
| Number<br>and Type<br>Length Att. &<br>Recovered (in | Number and Type  The graph of the first state of th |       |                            |                  |        |          | USCS     | Graphic Log | Well Diagram | PID/FID  | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Placticity<br>Index | P 200   | RQD/<br>Comments |
|  |  | 0.0   |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | F  |       | 0.0 - 42.0'                |                  |        |          |          | ===         |              |          |                         |                     |                 |                     |         |                  |
|  | Ē  | 20.0  |                            | .L: Unconsolida  | ted So | oil      |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | E  | 20.0  |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | -  | 40.0  | 42.0 - 53.0'<br>BLIND DRIL | L: Weathered     | bedro  | ck       |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | -  | 60.0  | 53.0 - 230.0<br>BLIND DRIL |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | -<br>-<br>-  | 80.0  |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | E  | 100.0 |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | ŀ  | 100.0 |                            | g at 230.0' bgs. |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | F  | 120.0 |                            | g at 200.0 bgs   | •      |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | F  |       |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | F  | 140.0 | )                          |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | ļ  |       |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | E  | 160.0 |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | E  | 180.0 |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | ţ  |       |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | F  | 200.0 |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  | Ę  |       |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  |  | 220.0 |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |
|  |  |       |                            |                  |        |          |          |             |              |          |                         |                     |                 |                     |         |                  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Byan Frankol Frank

Firm ARCADIS

126 N. Jefferson St., Suite 400

Milwaukee, WI 53202 (414) 276-7742

State of Wisconsin Department of Natural Resources SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater Waste Management Remediation/Redevelopment Other Page 1 of 1 Facility/Project Name License/Permit/Monitoring Number Boring Number Madison-Kipp Corporation MW-25D2 Boring Drilled By: Date Drilling Started Date Drilling Completed **Drilling Method** First Name: Todd Last Name: Schmelfeldt 4/4/2013 4/19/2013 Mud Rotary Firm: Boart Longyear Borehole Diameter WI Unique Well No. DNR Well ID No. Well Name Final Static Water Level Surface Elevation 12" to 53', 8" to 230' 845.32Feet MSL 886.97 Feet MSL VN191 MW-25D2 Local Grid Origin (estimated: ) or Boring Location Local Grid Location **2144829.8** E State Plane 398730.9 Ε Lat l N 1/4 1/4 of Section . Т Long  $\Box$ S N, R Feet Feet W Civil Town/City/or Village Facility ID County Code County 113125320 13 Madison Dane Soil Properties Sample Length Att. & Recovered (in) Depth in Feet Well Diagram Blow Counts Compressive Graphic Log Comments Soil/Rock Description PID/FID Strength Moisture Placticity And Geologic Origin For Content Liquid P 200 Each Major Unit Limit 0.0 0.0 - 42.0**BLIND DRILL: Unconsolidated Soil** 20.0 42.0 - 53.0' 40.0 BLIND DRILL: Weathered bedrock 60.0 53.0 - 230.0' BLIND DRILL: Bedrock 80.0 100.0 End of boring at 230.0' bgs. 120.0 140.0 160.0 180.0 200.0 220.0

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Buyan Fould Fund

Firm ARCADIS

126 N. Jefferson St., Suite 400

Milwaukee, WI 53202 (414) 276-7742

|                    |                                |              |                | Route to: Watershed/Wastewater Remediation/Redevelopment                               |                | e Manag<br>r 🔲 _                              | ement [        |                 |         |                         |                     |          |                    |             |                  |
|--------------------|--------------------------------|--------------|----------------|--|----------------|---|----------------|-----------------|---------|-------------------------|---------------------|----------|--------------------|-------------|------------------|
|                    |                                |              |                | ·  |                |   |                |                 |         |                         |                     | F        | Page _             | 1_          | _ of2_           |
| Facility/          |                                |              | /\//(          | 001368.0004.00001  | Lice           | ense/Per                                      | mit/Mor        | nitoring N      | Number  | •                       | В                   | oring N  | lumbei<br><b>N</b> |             | <br>26S          |
|                    |                                |              |                | chief (first, last) and Firm   | Dat            | e Drillin                                     | g Started      | 1               | Date [  | Orilling C              | Comple              | ted      | Drilling           |             |                  |
|                    | me Ry                          |              |                | Last Name Fett   |                | 08/2  | 1/12           |                 | 0       | 8/21/                   | 12                  |          |                    |             | w Stem           |
| Firm C             |                                | <u>ngine</u> | erin           | DNR Well ID No.   Well Name  |                |   | : Water Le     | ovol            |         | e Elevati               |                     |          |                    | ıgeı        | iameter          |
| P                  | M697                           | ,            |                | MW-26S   | <u> </u>       | 6.49  |                |                 |         | 57.51                   |                     | t MSL    |                    | . <u>25</u> | inches           |
| Local Gr           | id Origin                      |              | estima<br>R 61 | ted: ☐ ) or Boring Location  |                | _at   |                |                 | Local C | irid Loca               | tion                |          |                    |             |                  |
| State Fi           |                                |              |                | f Section ,T N,R   |                |   |                |                 |         | E                       | eet 🗖               |          |                    |             | ☐ E<br>Feet ☐ W  |
| Facility I         | 1/4 of<br>D                    |              |                |  | ty Code        |   | Civil Tow      |                 |         |                         | ес 🗀                | <u> </u> |                    | _           | reet 🗀 W         |
| 11.                | 31253                          | 320          | 丄              | Dane   | 13             | <u> </u>                                      |                | Mad             | ison    |                         |                     |          |                    |             |                  |
| Sam                |                                |              |                |  |                |   |                |                 |         |                         | Soil P              | ropei    | rties              |             |                  |
|                    | .&<br>(in)                     | ıts          | eet            | Soil/Rock Description  |                |   |                |                 |         | ive                     |                     |          |                    |             | 53               |
| ype<br>/pe         | h All.<br>rered                | Coun         | in             | And Geologic Origin For<br>Each Major Unit   |                |   | .≅             | E E             | □       | oress<br>gth            | ure                 | _        | U                  |             | nent             |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts  | Depth in Feet  |  |                | USCS  | Graphic<br>Log | Well<br>Diagram | PIDFID  | Compressive<br>Strength | Moisture<br>Content | iquid    | Plastic<br>Limit   | P 200       | RQD/<br>Comments |
| 1                  | 14.4                           | 4616         | 0              | 0-2'/  |                | +-  |                |                 | 37      | 0 8                     | 20                  |          |                    | <u> </u>    | <u> </u>         |
|                    |                                | 6            | _              | 0-1.5' Silt: Some clay; some sand; low p   | , .            |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              |                | slow dilatancy; dry; stiff (HP = 1.6); brown 4/3); no odor.                            | wn (7.5 YK     |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              |                | 1.5-2.0' Silt: Medium plasticity; and sar  |                |   |                |                 |         |                         |                     |          |                    |             |                  |
| Ш                  |                                |              | _2             | rounded, fine to medium, mostly fine; hup to 1/2", subangular; slow dilatancy;         |                | ا,  |                |                 |         |                         |                     |          |                    |             |                  |
| 2                  | 15.6                           | 3 3 5 5      |                | plasticity; dry; soft (HP = 0.5)' light brow   |                |   |                |                 | 38.2    |                         |                     |          |                    |             |                  |
|                    |                                |              |                | 6/4); no odor.   |                | 1   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              |                | 2-4'/<br>Clay: Medium plasticity; and silt; trace:                                     | sand, fine,    |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | _              | subrounded; no dilatancy; moist; stiff (I  | HP = 2.0);     |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | -4             | brown (7.5 YR 5/3); no odor; orange mo<br>increasing with depth.                       | ottling        | +   | -              |                 | 15.0    |                         |                     |          |                    |             |                  |
| 3                  | 24                             | 6798         | F              | 4-6'/  |                | -   |                |                 | 15.9    |                         |                     |          |                    |             |                  |
|                    |                                |              | _              | 4.0-4.9' Sand: Subrounded, fine to very  |                | ly  |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | _              | fine; little silt; little clay, moist; medium poorly sorted; reddish yellow (7.5 YR 6/ |                | r;  |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | F              | red to orange mottling present in clay   |                |   |                |                 |         |                         |                     |          |                    |             |                  |
| 4                  | 18                             | 3457         | -6             | 4.5-4.6' and 4.7-4.8'.<br>4.9-6.0' Sand: Rounded to subrounded                         | . fine: trace  | <u>,                                     </u> |                |                 | 43.9    |                         |                     |          |                    |             |                  |
|                    |                                |              | _              | silt; trace clay; well sorted; moist; loose;   |                | 11  |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | _              | brown (7.5 YR 5/6); no odor.<br>6-8'/  |                | ]   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              |                | 6.0-7.5' Sand: Rounded, very fine; some  |                |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              |                | silt; poorly sorted; moist; soft/medium  |                | 01  |                |                 |         |                         |                     |          |                    |             |                  |
| 5                  | 19.2                           | 3446         | -8             | brown (7.5 YR 5/4), no odor, clay lense f<br>7.5-8.0' Sand: Subrounded, medium; lit    |                |   |                | ]               | 29      |                         |                     |          |                    |             |                  |
|                    |                                | 8.8          |                | trace gravel, up to 1/2", subrounded; po   | orly sorted    | <b>3</b> ;                                    |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | L              | moist; loose; strong brown (7.5 YR 5/6); trace 1/4" black glassy gravel.               | no odor;       |   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | L              | 8-10′/   |                | ١   |                |                 |         |                         |                     |          |                    |             |                  |
|                    |                                |              | 10             | 8.0-8.9' Sand: Rounded, very fine; some  |                | -   |                |                 |         |                         |                     |          |                    |             |                  |
| 6                  | 14.4                           | 1322         | L              | silt; poorly sorted; wet; medium dense;<br>brown (7.5 YR 5/6); no odor; black clay     |                | $\downarrow \downarrow$                       |                |                 | 32.5    |                         |                     |          |                    |             |                  |
|                    |                                | that th      | e info         | ormation on this form is true and correct  | to the bes     | t of my                                       | knowle         | dge.            | •       |                         |                     |          |                    |             |                  |
| Signatu            | re                             | j            | 1.             | 1 1/1  | Firm AR<br>120 | CADIS<br>6 N. Jef                             | ferson         | St., Suit       | te 400  |                         |                     |          |                    |             |                  |
|                    |                                | L            | به ر           | V (AA  |                |   | e,WI (         |                 |         |                         |                     |          |                    |             |                  |

| Boring N           | umber                           | MW             | /-269                              | <u> </u>  |      |                |                 |          |                         |                     | I               | Page _           | 2     | of2_             |
|--------------------|---------------------------------|----------------|------------------------------------|---|------|----------------|-----------------|----------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sam                | ple                             |                |                                    |   |      |                |                 |          |                         | Soil Pı             | operti          | es               |       |                  |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts    | Depth in Feet                      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | (PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                 |                | -<br>-<br>-                        | in 2 mm lenses throughout.<br>8.9-10' Sand: Subrounded, fine; trace clay; trace<br>silt; trace gravel, subrounded, up to 1/4"; poorly<br>sorted; wet; loose; light brown (7.5 YR 6/4); no<br>odor.  |      |                |                 |          |                         |                     |                 |                  |       |                  |
| 7                  | 16.8                            | 1121           | -<br>-<br>-                        | 10-15.3'/ 10-15.3' Sand: Subrounded, fine to medium, mostly fine; trace clay; trace silt; trace gravel, up to 1/2", subangualr, moderate cementation, sand- stone; poorly sorted; wet; loose; white (7.5 YR 8/1); no odor.  |      |                |                 | 2.1      |                         |                     |                 |                  |       |                  |
| 8                  | 20.4                            | 1223           | 14<br>                             |   |      |                |                 | 3.5      |                         |                     |                 |                  |       |                  |
|                    |                                 |                | -<br>-<br>-                        | 15.3-16'/ Sand: Rounded, very fine; little clay; little silt; trace gravel up to 1", angular; poorly sorted; loose; dark gray (7.5 YR 4/1); no odor.  |      |                |                 |          |                         |                     |                 |                  |       |                  |
| 9                  | 21.6                            | 11 23<br>30 28 | -<br>-<br>-                        | 16-18'/ 16-16.3' Sand: Rounded, very fine; little clay; little silt; trace gravel, up to 1", angular; poorly sorted; loose; dark gray (7.5 YR 4/1); no odor. 16.3-16.7' Sand: Rounded, fine; little clay; trace silt; poorly sorted; wet; loose; light brown (7.5 YR -6/4); no odor; 2" angular sandstone sheered into  |      |                |                 | 2.1      |                         |                     |                 |                  |       |                  |
|                    |                                 |                | -<br>-<br>-<br>-<br>- 20<br>-<br>- | splitspoon core. 16.7-17.2' Sand: Subrounded, medium; trace clay trace silt; little gravel, up to 1", angular, moderate cementation, sandstone; poorly sorted; wet; loose; light brown (7.5 YR 6/4); no odor; sandstone gravel red to yellow (7.5 YR6/8). 17.2-18' Sand: Subrounded, fine; little clay; trace silt; trace gravel, up to 1/4", angular, sandstone, white (7.5 YR 1/1); poorly sorted; wet; loose; brow (7.5 YR 4/2); no odor; coarse, subangular, sand from 17.6 to 17.7', olive (5 Y 4/3) and black (7.5 YR 2.5/1). |      |                |                 |          |                         |                     |                 |                  |       |                  |
|                    |                                 |                | - 22<br>24<br>24<br>26<br>28       | YR 2.5/1).<br>EOB @ 18.0'   |      |                |                 |          |                         |                     |                 |                  |       |                  |

|                    |                         |             | <u>F</u>                                 | Route to: Watershed/Wastewater Remediation/Redevelopment  |   | aste M<br>ther <b>「</b> | _             | ement 🗀        | ]               |           |                         |                     |                 |                  |  |                     |
|--------------------|-------------------------|-------------|--|---|---|-------------------------|---------------|----------------|-----------------|-----------|-------------------------|---------------------|-----------------|------------------|--|---------------------|
|                    |                         |             |  | ·   |   | •                       |               |                |                 |           |                         |                     | F               | Page             | 1  | _ of2_              |
| Facility/Pro       |                         |             | 001                                      | 368.0004.00001  | 1   | Licens                  | e/Per         | mit/Mon        | itoring N       | lumber    |                         | В                   |                 | lumber           |  | <br>27D             |
| Boring Dril        | led By: Na              | me of       |  | chief (first, last) and Firm  | 1   | Date D                  | Prilling      | g Started      |                 | Date [    | Orilling C              | omple               | ted             | Drilling         | g Met  | hod                 |
| First Name         |                         |             |  | Last Name Schmalfeldt   |   | 1                       | 1/1           | 8/201          | 3               | 1         | 2/03/2                  | 2013                |                 | Mı               | ud F   | Rotary              |
| WI Unique<br>VN1   |                         |             |  | DNR Well ID No. Well Name MW-27D  |   | Final 9                 | Static        | Water Le       |                 |           | e Elevati<br>62.96      |                     |                 | Boreh            |  | iameter             |
| Local Grid         | Origin [                | (es         | stimat                                   | red: \( \) or Boring Location \( \)   |   |                         |               | Fee            |                 |           | rid Loca                |                     | t MSL [         |                  | <u>,                                    </u> | inches              |
| State Plan         | e <u>401</u>            | 658         | 3.63                                     | N, <u>2143889.24</u> E S□/CL  |   | Lat                     |               |                |                 |           |                         |                     |                 |                  |  |                     |
| 1,<br>Facility ID  | /4 of                   |             |  | Section,TN,R<br>unty Cour   | <u> </u>  | Long                    | <del></del>   | Civil Tow      | rn/City/o       | r Village |                         | eet 🗆               | S _             |                  | _  | Feet W              |
|                    | 25320                   |             |  | Dane  | 13  |                         | _             |                | Mad             | ison      |                         |                     |                 |                  |  |                     |
| Sample             |                         |             |  |   |   |                         |               |                |                 |           |                         | Soil F              | ropei<br>I      | rties            |  |                     |
| Number<br>and Type | Recovered (in)          | Blow Counts | Depth in Feet                            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   |   |                         | USCS          | Graphic<br>Log | Well<br>Diagram | PID/FID   | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200  | RQD/<br>Comments    |
|                    | 3.2 23                  | 44          | 0  | 0-2'/   |   |                         |               |                |                 | 0.0       |                         |                     |                 |                  |  | 140 pound<br>hammer |
|                    | 7.2 10 35 35 37.2 35 14 | 20 -        | -<br>-<br>- 2<br>-<br>-<br>-<br>-<br>- 4 | 0-0.8' Silt: High plasticity, no dilatancy; trace sand; moist; soft, HP = 1.5; brown 4/2); no odor; no staining. 0.8-1.5' Clay: Medium plasticity, no dilasome silt; dry; very stiff, HP = 4.5; light by R 6/4); no odor; no staining; orange methroughout. 1.5-2.0' Silt: Low plasticity, slow dilatanclay; trace gravel, 1/8-1/2", subrounded HP = 0.5; brown (7.5 YR 5/4); no odor; no 2-4'/ 2.0-3.0' Silt: Low plasticity, slow dilantaclay; dry; soft, HP = 0.5; brown (7.5 YR 5/4); no odor; no staining. | (7.5 YR atancy; prown (7 nottling acy; some d; dry; so no stainin ancy; sor | 7.5<br>e<br>ift,<br>ng. |               |                |                 | 0.0       |                         |                     |                 |                  |  | 300 pound<br>hammer |
| 4 1                | 5.6 44                  | 4.7         | -<br>-<br>-                              | 3.0-4.0' Gravel: Subangular, 1/4-1" som<br>little silt; poorly sorted; dry; very loose;<br>brown (10 YR 8/2); gravel is sandstone,<br>cementation; clay is yellowish-red (5 Y<br>pdor; no staining.   | ; very pa<br>, strong   |                         |               |                |                 | 0.0       |                         |                     |                 |                  |  |                     |
|                    |                         | -           | -<br>-<br>-<br>-<br>-8                   | 4-6'/<br>4.0-6.0' Clay: Medium plasticity, no dila<br>silt; some gravel; angular, 1/8-1/4"; dry,<br>0.75; brown (7.5 YR 4/4); no odor, no st<br>6-8'/<br>6.0-8.0' Clay: Medium plasticity, no dila  | ; soft, HP<br>aining.<br>atancy; l  | ittle                   |               |                |                 |           |                         |                     |                 |                  |  |                     |
|                    | 24 43                   | -           | -<br>-<br>-                              | silt; moist; medium stiff, HP = 2.0; light YR 6/4); no odor; no staining; orange methroughout.  8-10'/ 8.0-10.0' Clay: Medium plasticity, no disome silt; moist; medium stiff, HP = 2.0  7.5 YR 6/4); no odor; no staining; yello   | nottling<br>ilatancy;<br>i; light bi  | ;<br>rown               |               |                |                 | 0.0       |                         |                     |                 |                  |  |                     |
|                    |                         |             | info                                     | 5 YR 4/6) mottling from 8.7-9.1'.   | to the L  | 2051.5                  | f my          | knowla         | das             | "."       |                         |                     |                 |                  |  |                     |
| Signature          |                         | at the      | 1 /                                      | Innation on this form is true and correct   | Firm /  | ARCA<br>126 N           | DIS<br>J. Jef | ferson         | St., Suit       | te 400    | 2                       |                     |                 |                  |  |                     |
|                    | 1                       |             | 0 (N)                                    |   |   | WIIIWa                  | auke          | e,WI (4        | 414) 2/         | o-//4     | _                       |                     |                 |                  |  |                     |

| Boring Number  | MW          | /-27[                         | <u>)                                    </u>  |      |                |                 |         |                         |                     | 1               | Page _           | 2         | of <u>2</u>      |
|--|-------------|-------------------------------|---|------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-----------|------------------|
| Sample   |             |                               |   |      |                |                 |         |                         | Soil Pı             | operti          | es               | $\square$ |                  |
| Number<br>and Type<br>Length All.&<br>Recovered (in) | Blow Counts | Depth in Feet                 | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic<br>Log | Well<br>Diagram | PID)FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200     | RQD/<br>Comments |
|  |             |                               | 10-12'/ 10.0-12.0' Clay: High plasticity, no dilatancy; and silt; moist; medium stiff, HP = 1.5; reddish yellow (7.5 YR 6/6); no odor; black staining from 10.4-10.8'; red-brown mottling from 10.4-11.4'.  |      |                |                 |         |                         |                     |                 |                  |           |                  |
| 7 15.6   | 5 5 6 5     | -<br>-<br>-                   | 12-14'/ 12.0-12.8' Clay: High plasticity, no dilatancy; some silt; some sand, medium, subrounded, red (2.5 YR 4/8); moist; medium stiff, HP = 1.5; reddish yellow (7.5 YR 6/6); sand increasing with depth. 12.8-14.0' Sand: Subrounded, medium to coarse, mostly medium; trace clay; well sorted; moist; |      |                |                 | 2.1     |                         |                     |                 |                  |           |                  |
| 8 12   | 5 5 4 4     | -<br>-<br>-                   | loose; yellowish red (5 YR 5/6); no odor; no staining; clay lens at 13.4-13.5'; more tan with depth.  14-16'/ 14.0-16.0' Sand: Subrounded, medium to coarse, mostly medium; well sorted; wet at 16'; loose;   |      |                |                 | 3.5     |                         |                     |                 |                  |           |                  |
| 9 12   | 669         | -<br>-<br>-                   | light yellowish brown (10 YR 6/4); no odor, no staining.  16-18'/ 16.0-18.0' Sand: Subrounded, medium to coarse, mostly medium; little clay; trace gravel, pebbles, subrounded; poorly sorted; wet; loose; light yellowish brown (10 YR 6/4); no staining.  |      |                |                 | 2.1     |                         |                     |                 |                  |           |                  |
| 10   |             | -<br>-<br>-                   | 18-28'/<br>Weathered Bedrock (Blind Drilled).   |      |                |                 |         |                         |                     |                 |                  |           |                  |
| 11   |             | - 28<br>-<br>-<br>-<br>-<br>- | 28-227'/<br>Competent Bedrock (Blind Drilled).  |      |                |                 |         |                         |                     |                 |                  |           |                  |
|  |             | -<br>-<br>-<br>-              |   |      |                |                 |         |                         |                     |                 |                  |           |                  |
|  |             | -<br>-<br>-<br>-              |   |      |                |                 |         |                         |                     |                 |                  |           |                  |
|  |             | -<br>-<br>-                   |   |      |                |                 |         |                         |                     |                 |                  |           |                  |

|  | Route to: Watershed/Wastewater Remediation/Redevelopment   |  |                             | ement [              |                      |                |                         |                     |                 |                  |                   |                     |
|--|--|--|-----------------------------|----------------------|----------------------|----------------|-------------------------|---------------------|-----------------|------------------|-------------------|---------------------|
|  |  |  |                             |                      |                      |                |                         |                     | F               | Page _           | 1                 | of 2                |
| Facility/Project Name  |  | Lice   | nse/Peri                    | mit/Mon              | itoring N            | lumber         |                         | Во                  | oring N         | lumber           |                   |                     |
| Madison-Kipp/WI001   |  |  |                             |                      |                      |                |                         |                     |                 | MW-              |                   |                     |
| Boring Drilled By: Name of crew  |  | Date   | e Drilling                  | Started              |                      | Date D         | Orilling C              | omple               | ted             | Drilling         | g Met             | hod                 |
| First Name Todd Firm Cascade Drilling  | Last Name Schmalfeldt  |  |                             | 8/201                |                      |                | 2/03/2                  |                     |                 |                  |                   | Rotary              |
| WI Unique Well No. VN146   | DNR Well ID No. Well Name MW-27D2  |  | al Static                   | Water Le             |                      | 8              | e Elevation 62.96       | Feet                | t MSL           | Boreh            | iameter<br>inches |                     |
| Local Grid Origin (estima State Plane 401658 63                                      | ted: ☐ ) or Boring Location ☐<br>N, <u>2143889.24</u> E S☐/C☐  | ]/N□I  | at                          |                      |                      | Local G        | rid Loca                | tion                | N               |                  | □E                |                     |
|  | f Section,T N,R  | E Lon  |                             |                      |                      |                | Fe                      | et 🗆                |                 |                  |                   | Feet W              |
|  |  | nty Code   |                             | Civil Tow            | r(/City/o            | r Village      |                         |                     | <u> </u>        |                  | _                 | Teet W              |
| 113125320  | Dane   | 13   |                             |                      | Mad                  | ison           |                         |                     |                 |                  |                   |                     |
| Sample   |  |  |                             |                      |                      |                |                         | Soil P              | rope            | rties            |                   |                     |
| Number<br>and Type<br>Length All.&<br>Recovered (in)<br>Blow Counts                  | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  |  | USCS                        | Graphic<br>Log       | Well<br>Diagram      | PIDIFID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200             | RQD/<br>Comments    |
| 1 13.2 2344 0  | 0-2'/  |  |                             |                      |                      | 0.0            |                         |                     |                 |                  |                   | 140 pound           |
| 2 7.2 10 30<br>35 20 -<br>3 7.2 35 15<br>14 12 -<br>4 15.6 4447 -<br>5 20.4 43 3 4 8 | 0-0.8' Silt: High plasticity, no dilatancy; trace sand; moist; soft, HP = 1.5; brown 4/2); no odor; no staining. 0.8-1.5' Clay: Medium plasticity, no dila some silt; dry; very stiff, HP = 4.5; light by R 6/4); no odor; no staining; orange methroughout. 1.5-2.0' Silt: Low plasticity, slow dilatance lay; trace gravel, 1/8-1/2", subrounded HP = 0.5; brown (7.5 YR 5/4); no odor; no 2-4'/ 2.0-3.0' Silt: Low plasticity, slow dilantal clay; dry; soft, HP = 0.5; brown (7.5 YR 5 odor; no staining. 3.0-4.0' Gravel: Subangular, 1/4-1" some little silt; poorly sorted; dry; very loose; brown (10 YR 8/2); gravel is sandstone, cementation; clay is yellowish-red (5 YF odor; no staining. 4-6'/ 4.0-6.0' Clay: Medium plasticity, no dilasilt; some gravel; angular, 1/8-1/4"; dry; 0.75; brown (7.5 YR 4/4); no odor, no stailt; moist; medium stiff, HP = 2.0; light ly R 6/4); no odor; no staining; orange m | (7.5 YR  stancy; sorown (7.5  ottling  cy; some  dy; soft, o staining.  stancy; some  dy); no  e clay; very pale strong  R 4/6); no  atancy; som  soft, HP = aining. | e.                          |                      |                      | 0.0            |                         |                     |                 |                  |                   | 300 pound<br>hammer |
| 6 24 4334 10   | throughout.  8-10'/  8.0-10.0' Clay: Medium plasticity, no di some silt; moist; medium stiff, HP = 2.0;  (7.5 YR 6/4); no odor; no staining; yellov (5 YR 4/6) mottling from 8.7-9.1'.   | latancy;<br>; light brow<br>wish red   |                             |                      |                      | 0.0            |                         |                     |                 |                  |                   |                     |
|  | ormation on this form is true and correct  |  |                             | knowle               | dge.                 |                |                         |                     |                 |                  |                   |                     |
| Signature  |  | 126  | CADIS<br>5 N. Jeft<br>wauke | ferson :<br>e, WI (4 | St., Suit<br>414) 27 | e 400<br>6-774 | 2                       |                     |                 |                  |                   |                     |

| Boring Number   | MV          | MW-27D2 Page2            |  |      |                |                 |         |                         |                     |                 | 2                | of <u>2</u> |                  |
|---|-------------|--------------------------|--|------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------------|------------------|
| Sample  |             |                          |  |      |                |                 |         |                         | Soil Pi             | roperti         | es               |             |                  |
| Number<br>and Type<br>Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200       | RQD/<br>Comments |
|   | 5 5 6 5     | -<br>-<br>-              | 10-12'/ 10.0-12.0' Clay: High plasticity, no dilatancy; and silt; moist; medium stiff, HP = 1.5; reddish yellow (7.5 YR 6/6); no odor; black staining from 10.4-10.8'; red-brown mottling from 10.4-11.4'.   |      |                |                 | 2.1     |                         |                     |                 |                  |             |                  |
| 7 15.6  | 3303        | -<br>-<br>-              | 12.0-12.8' Clay: High plasticity, no dilatancy; some silt; some sand, medium, subrounded, red (2.5 YR 4/8); moist; medium stiff, HP = 1.5; reddish yellow (7.5 YR 6/6); sand increasing with depth. 12.8-14.0' Sand: Subrounded, medium to coarse.         |      |                |                 | 2.1     |                         |                     |                 |                  |             |                  |
| 8 12  | 5 5 4 4     | - 14<br>-<br>-<br>-      | mostly medium; trace clay; well sorted; moist; loose; yellowish red (5 YR 5/6); no odor; no staining; clay lens at 13.4-13.5'; more tan with depth.  14-16'/ 14.0-16.0' Sand: Subrounded, medium to coarse, mostly medium; well sorted; wet at 16'; loose; |      |                |                 | 3.5     |                         |                     |                 |                  |             |                  |
| 9 12  | 669         | - 16<br>-<br>-<br>-      | ight yellowish brown (10 YR 6/4); no odor, no staining.  16-18'/ 16.0-18.0' Sand: Subrounded, medium to coarse, mostly medium; little clay; trace gravel, pebbles, subrounded; poorly sorted; wet; loose; light yellowish brown (10 YR 6/4); no staining.  |      |                |                 | 2.1     |                         |                     |                 |                  |             |                  |
| 10  |             | - 18<br>-<br>-<br>-<br>- | 18-28'/ Weathered Bedrock (Blind Drilled).   |      |                |                 |         |                         |                     |                 |                  |             |                  |
| 11  |             | -<br>-<br>-<br>-         | 28-227'/<br>Competent Bedrock (Blind Drilled).   |      |                |                 |         |                         |                     |                 |                  |             |                  |
|   |             | -                        |  |      |                |                 |         |                         |                     |                 |                  |             |                  |
|   |             | -<br>-<br>-              |  |      |                |                 |         |                         |                     |                 |                  |             |                  |
|   |             | -<br>-<br>-<br>-         |  |      |                |                 |         |                         |                     |                 |                  |             |                  |
|   |             | -                        |  |      |                |                 |         |                         |                     |                 |                  |             |                  |

| State of Wisconsin              |  |
|---------------------------------|--|
| Department of Natural Resources |  |

Soil Boring Log Information Form 4400-122

|                    | /Project N<br>ison-K           |             |               |   |  | Licens        | se/Per  | mit/Mor        | nitoring I      | Number                   |                         | В                   | oring N         | Numbe<br>02/N    | r                | of <u>3</u>      |  |  |  |
|--------------------|--------------------------------|-------------|---------------|---|--|---------------|---------|----------------|-----------------|--------------------------|-------------------------|---------------------|-----------------|------------------|------------------|------------------|--|--|--|
|                    |                                |             |               | v chief (first, last) and Firm  |  | Date D        | Drillin | g Started      | i               | Date I                   | Drilling (              | Comple              | _               | Drillin          |                  |                  |  |  |  |
|                    | <sub>ame</sub> Cl<br>Giles E   |             |               | Last Name   |  | (             | 03/0    | 4/15           |                 | (                        | 03/04                   | /15                 |                 | Hollo            | w St             | em Auger         |  |  |  |
| WIUni              | que Well                       | No.         | ceiiii        | DNR Well ID No. We  | ll Name  | Final         | Static  | Water L        | evel            | Surfac                   | e Elevati               | ion                 |                 | Boreh            | ole Di           | ameter           |  |  |  |
| 1 1 0              | -1-1-0-1-1-                    |             |               |   | -202/MW-28   |               |         | Fee            | et              |                          |                         | _ Fee               | inches          |                  |                  |                  |  |  |  |
| State F            | Plane 3                        | 9966        | 6.77          | nted: ( ) or Boring Location ( N, 2144113.37  | E S /C /N  | Lat           |         |                |                 | Local G                  | irid Loca               | tion                | IN              |                  |                  | □E               |  |  |  |
| SW                 | 1/4 of                         |             | _ 1/4 0       | f Section 5 ,T 7 N  | µR10 □ W   | E Long Feet S |         |                |                 |                          |                         |                     |                 |                  | Feet $\square$ W |                  |  |  |  |
|                    | 31253                          |             | 200           | Dane  | County Code  | 2             |         | Civil Tow      | /r(/City)c      |                          | 9                       |                     |                 |                  |                  |                  |  |  |  |
| _                  | nple                           | 120         | 1             | Darie   | 13   | $\neg$        |         |                | Mad             | ison                     |                         | Soil F              | rope            | rties            |                  |                  |  |  |  |
|                    |                                |             |               | 5 110 1 0   |  |               |         |                |                 |                          |                         |                     | Tope            | ties             |                  |                  |  |  |  |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Des<br>And Geologic<br>Each Major Ur  | Origin For   |               | USCS    | Graphic<br>Log | Well<br>Diagram | PIDFID                   | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200            | RQD/<br>Comments |  |  |  |
| 1/                 |                                |             | 0             | Concrete.   |  |               |         |                |                 |                          | 001                     | 20                  |                 |                  |                  | 40               |  |  |  |
| 2                  | 10.8                           |             |               | 1-2'/<br>0.0-0.2' Fill, Sand and Grave<br>0.2-0.9' Silty Clay: Stiff, low<br>brown, dry.  |  | dish          |         |                |                 | 0.2-0.9<br>1.1           |                         |                     |                 |                  |                  |                  |  |  |  |
| 3                  | 4.8                            |             | -2            | 2-4'/   |  | +             |         |                |                 | 224                      |                         |                     |                 |                  |                  |                  |  |  |  |
|                    |                                |             | -             | 2.0-2.4' Silty Clay: Stiff, low<br>brown, dry, clay, some silt.   | plasticity, dark redo  | dish          |         |                |                 | 2-2.4<br>0.8             |                         |                     |                 |                  |                  |                  |  |  |  |
| -                  |                                |             | 4             | 4 211   |  |               |         |                |                 |                          |                         |                     |                 |                  |                  |                  |  |  |  |
| 4                  | 24                             |             | -             | 4-6'/ 4.0-4.8' Silty Clay: Stiff, low prown, dry, clay, some silt, tr 4.8-6.0' Sand: Trace to little clay nodules, very fine to fir loose to medium dense, recomoist. | ace little sand.<br>clay, trace intermix<br>ne, poorly sorted,         | ed            |         |                |                 | 4-5<br>0.8<br>5-6<br>0.7 |                         |                     |                 |                  |                  |                  |  |  |  |
| 5                  | 16.8                           |             | - 6           | 6-8'/ 6.0-7.0' Sand: Trace clay and mixed clay nodules, very fin loose to medium dense, red moist. 7.0-7.4' Sand: Trace clay and mixed clay nodules, very fin         | e to fine, poorly sor<br>Idish brown slightly<br>d gravel, trace inter | rted,<br>y    |         |                |                 | 6-7.4<br>0.6             |                         |                     |                 |                  |                  |                  |  |  |  |
| 6                  | 16.8                           |             | 8<br><br><br> | lpose to medium dense, red<br>moist, some black slag, rock<br>8-10'/<br>8.0-9.4' Sand: Trace to little<br>very fine to fine, poorly sorte<br>brown, dry.              | dish brown slightly<br>fragments.<br>gravel, trace slag, lo            | y             |         |                |                 | 8-9.4<br>0.8             |                         |                     |                 |                  |                  |                  |  |  |  |
| 7/                 | 7.2                            |             | 10            | 10-12'/   | -  |               |         |                | 10-11.9         |                          |                         |                     |                 |                  |                  |                  |  |  |  |
| / /                | 1.2                            |             | -             | 10.0-10.6' Sand: Trace to littl   | o arayal traco class   |               |         |                | 1               | 1.9                      |                         |                     |                 |                  |                  |                  |  |  |  |

Sample Soil Properties Length All.& Recovered (in) Depth in Feet Soil/Rock Description Compressive Strength **Blow Counts** RQD/ Comments And Geologic Origin For Number and Type Moisture Content Liquid Limit PID)FID Each Major Unit Plastic Limit P 200 very fine to fine, poorly sorted, light yellowish brown, dry, trace gravel. 12-14'/ 10.8 2-12.9 8 12.0-12.5' Fragmented rock, micseous limestone. 2.2 12.5-12.9' Sand: Little clay, trace gravel/rock fragments, very fine to fine, poorly sorted, loose to medium dense, light reddish brown, dry. 9 14-16'/ 16.8 4-15.4 14.0-15.4' Sand: Little clay, trace gravel/rock 2.1 fragments, very fine to fine, poorly sorted, loose to medium dense, light reddish brown, dry, large rock fragments 14-14.7'. 16-18'/ 10 22.8 16-17 16.0-17.9' Sand: Little clay, trace gravel/rock 2.3 fragments, very fine to fine, poorly sorted, loose to medium dense, light reddish brown, dry, large 7-17.9 rock fragments 16.1-16.6' and 16.9-17.2'. 1.3 18-20'/ 11 No recovery. 12 13.2 20-22'/ 20-21. 20.0-21.1' Sand: Little rock fragments and gravel, 1.1 trace clay, very fine to fine, poorly sorted, subrounded, loose to medium dense, light reddish brown, dry. 22 22-24'/ 13 22-23. 13.2 22.0-22.4' Rock Fragments. 2.5 22.4-23.1' Sand and Clay: Trace to little rock fragments, soft to medium stiff, no to low plasticity, clay content decreases with depth, light reddish brown, moist. 24 14 24-26'/ 22.8 24-25. 24.0-24.4' Rock Fragments. 2.1 24.4-25.4' Sand: Little silt, little rock fragments, medium dense, very fine to fine, poorly sorted, light reddish brown, dry to slightly moist. -26 15 9.6 26-28'/ 26-26.8 26.0-26.8' Sand: Little silt, little rock fragments, 2.1 medium dense, very fine to fine, poorly sorted, light reddish brown, dry to slightly moist, little clay, trace silt. 28 16 8.4 28-28.7 28.0-28.7' Sand: Little rock fragments/gravel, trace 2.1 silt, loose, very fine, poorly sorted, light reddish

B-202/MW-28

**Boring Number** 

B-202/MW-28 Boring Number Page \_\_3\_\_ of \_\_3\_ Sample Soil Properties Length All. & Recovered (in) Soil/Rock Description And Geologic Origin For Each Major Unit Depth in Feet **Blow Counts** Compressive Strength RQD/ Comments Number and Type Well Moisture Content Graphic Log CONTROL OF THE PROPERTY OF THE Liquid Limit Plastic Limit P 200 brown, slightly moist to moist. -30 17 30-32'/ No recovery. -32 18 32-34'/ 14.4 Refusal rock. -34 -36 -38 - 40 - 42 -44 - 48

State of Wisconsin Department of Natural Resources

## SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

|                     |                                 |                  | <u>Rc</u>       |              | Watershed/W<br>Remediation/ | astewater   Redevelopment | Waste<br>Other   | _          | ement          |                 |              |                         |                     |                 |                     |        |                              |  |
|---------------------|---------------------------------|------------------|-----------------|--------------|-----------------------------|---------------------------|------------------|------------|----------------|-----------------|--------------|-------------------------|---------------------|-----------------|---------------------|--------|------------------------------|--|
|                     |                                 |                  |                 |              |                             |                           |                  |            |                |                 |              |                         |                     | Pag             | re 1                | of     | 2                            |  |
|                     | y/Projec                        |                  |                 |              |                             |                           | License/         |            |                | ring Nu         | mber         |                         | Boring              | Numbe           | er                  |        |                              |  |
|                     | lison l                         |                  |                 | f crew chief | f (first, last) ar          | nd Firm                   | Date Dri         |            |                |                 | Da           | te Drilli               | ng Con              | nnleted         | M۱                  | N-29   | ing Method                   |  |
| _                   | ig Pla                          | -                | varie o         | r crew ciner | (11131, 1431) 41            | III IIII                  | Bute Bir         | ining 5    | urtea          |                 | Du           | te Dillii               | 115 COII            | приссе          |                     |        | llow stem                    |  |
| Gro                 | und S                           | ource            |                 | DMD M        | II IID N                    | C WIN                     |                  |            |                |                 |              |                         | 1/16/2              | 2018            | l D                 | au     | ger                          |  |
| WI Un               | ique W<br>VS                    | 'eli No.<br>8879 |                 | DNR We       | ell ID No.                  | Common Well Name MW-29S   |                  |            |                |                 |              | e Elevat<br>376.0 l     |                     | 4SL             | Во                  |        | Diameter inches              |  |
|                     | Grid Or                         |                  | (es             | stimated:    |                             | ing Location 🖂            | Lat '            |            |                |                 |              | Local C                 |                     |                 |                     |        |                              |  |
| State I             |                                 | of S             | ( <b>X</b> /7 1 | // of Castia |                             | E S/C/N<br>T 7 N, R 10 E  |                  |            | o              | ,               |              |                         | East                | □ N<br>□ S      |                     | 1      | ☐ E<br>Feet ☐ W              |  |
| S vv<br>Facility    |                                 | 01 3             | VV 1            | /4 of Sectio | on 3,<br>ounty              | T 7 N, R 10 E             | Lon<br>County Co | g <u> </u> | Civil To       | own/Ci          | <br>ty/ or \ | Village                 | Feet                | <u> </u>        |                     |        | reet 🗆 w                     |  |
|                     | 12532                           | 20               |                 | D            | ane                         |                           | 13               |            | Madi           | son             |              | _                       |                     |                 |                     |        |                              |  |
| San                 | _                               |                  |                 |              |                             |                           |                  |            |                |                 |              |                         | Soil                | Prope           | erties              |        |                              |  |
|                     | &<br>(in)                       | ıts              | eet             |              |                             | ock Description           |                  |            |                |                 |              | _ se                    |                     |                 |                     |        |                              |  |
| er<br>/pe           | ι Att<br>ered                   | Cour             | In F            |              |                             | ologic Origin For         |                  | S          | ic.            | 틸               |              | ressi                   | ıre l               | _               | ity                 |        | ents                         |  |
| Number<br>and Type  | Length Att. &<br>Recovered (in) | Blow Counts      | Depth In Feet   |              | Eac                         | h Major Unit              |                  | SC         | Graphic<br>Log | Well<br>Diagram | PID/FID      | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plasticity<br>Index | P 200  | RQD/<br>Comments             |  |
| <u>8</u> \(\sigma\) | L                               | _ m              | _ <u></u>       |              |                             | 35' bgs, see MW-29D       | log for          | n          | <u> </u>       |                 | Ъ            | O S                     | 20                  | 7 7             | P<br>Iı             |        | 2 0                          |  |
|                     |                                 |                  | -               | lithology.   | •                           |                           |                  |            | 1/ 1/1/        |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -2              |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | E               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | <u>-</u>        |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | <u> </u>        |              |                             |                           |                  | CL         |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | <del>-</del> 6  |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | E               |              |                             |                           |                  | ML         |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -8              |              |                             |                           |                  | CL         |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | _               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -10             |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | _<br>12         |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | - 12            |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | 14<br>          |              |                             |                           |                  | SP         |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | _16             |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | _               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | -<br>18         |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  | Ė               |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
|                     |                                 |                  |                 |              |                             |                           |                  |            |                |                 |              |                         |                     |                 |                     |        |                              |  |
| hereb               | v certif                        | v that t         |                 | rmation on t | this form is tr             | ue and correct to the b   | est of my k      | nowled     | ge.            | <u> </u>        |              | 1                       |                     |                 |                     |        |                              |  |
| Signat              | -                               | .,               |                 |              | 101111 15 11                | le:                       | RC Enviro        |            |                | rnora           | tion         |                         |                     |                 |                     | Tel· i | 608-826-3600                 |  |
|                     |                                 |                  |                 |              |                             | 11                        | Heartland        | Trail S    | uite 300       | 0 5371          | 7            |                         |                     |                 |                     |        | 508-820-3000<br>508-238-7156 |  |

Form 4400-122A

| Boring Number  | MW            | V-29S Use only as an attachment to Form 4400-1                 | 22. |                        |          |         |                         |                     |                 | ge 2                | of .  | 2                |
|--|---------------|--|-----|------------------------|----------|---------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Sample   |               |  |     |                        | T        |         |                         | Soil                | Prope           | rties               |       |                  |
| (in) &   | g             | Soil/Rock Description  |     |                        |          |         | e/e                     |                     |                 |                     |       |                  |
| r<br>pe<br>Att.  | n Fe          | And Geologic Origin For  | S   |                        | я        |         | essiv<br>h              | e _                 |                 | ty                  |       | ents             |
| Number<br>and Type<br>Length Att. &<br>Recovered (in)<br>Blow Counts | Depth In Feet | Each Major Unit  | SCS | Graphic<br>Log<br>Well | Diagram  | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plasticity<br>Index | 00    | RQD/<br>Comments |
| Nu and and Let Red Red Blo   | De            |  | S D | Grapl<br>Log<br>Well   | Dia      | PII     | Str                     | နို ပိ              | Liquid<br>Limit | Plastic<br>Index    | P 200 | RQD/<br>Comm     |
|  | -             | Boring blind drilled to 35' bgs, see MW-29D log for lithology. |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | F             |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -22           |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | F             |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -24           |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | E             |  | SP  |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -26           |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | <b>-</b>      |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -28           |  |     |                        | <b>▼</b> |         |                         |                     |                 |                     |       |                  |
|  | E             |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | _30           |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -             |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | -32           |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | F             |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  | _<br>-34      |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               | Boring terminated at 35 feet bgs (1/16/2018).                  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
|  |               |  |     |                        |          |         |                         |                     |                 |                     |       |                  |
| 1 1  | I             | I  | I   | 1 1                    | - 1      |         | I                       | l                   | l               |                     |       |                  |

State of Wisconsin Department of Natural Resources

## SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

|  |             | <u>Ro</u>     | ute To:   |                               | Wastewater<br>n/Redevelopn |                | Waste<br>Other                       | _                   | gement         |          |          |                         |                        |                 |                     |                        |                              |  |
|--|-------------|---------------|-----------|-------------------------------|----------------------------|----------------|--------------------------------------|---------------------|----------------|----------|----------|-------------------------|------------------------|-----------------|---------------------|------------------------|------------------------------|--|
|  |             |               |           |                               |                            |                |                                      |                     |                |          |          |                         |                        | Pag             | ge 1                | of                     | 2                            |  |
| Facility/Project   |             |               |           |                               |                            |                | License                              |                     |                | ring N   | umber    |                         | Boring                 | Numb            |                     | V 20                   | ıD.                          |  |
| Madison Boring Drilled   |             |               | f crew ch | nief (first, last)            | and Firm                   |                | Date Dr                              | 3-5780<br>filling S |                |          | Da       | ate Drilli              | ng Con                 | npleted         |                     | <b>V-2</b> 9<br>□Drill | ing Method                   |  |
| Craig Pla<br>Ground S  | nt          |               |           | , , ,                         |                            |                |                                      |                     | 5/2018         |          |          |                         | 1/15/2                 |                 |                     | rotary (air or mud)    |                              |  |
| WI Unique W  | ell No.     |               | DNR V     | Well ID No.                   |                            | Well Name      | Final Static Water Level Surface Ele |                     |                |          |          |                         | tion                   |                 | Во                  | Borehole Diameter      |                              |  |
| VS<br>Local Grid On  | 878         |               | stimated: | □ \ ar Da                     | oring Location             | V-29D          | 84                                   | 4.8 Fe              | et MS          | L        |          |                         | Feet MSL Grid Location |                 |                     |                        | inches                       |  |
| State Plane  | ıgııı       | ☐ (es         | stimated. | □ ) or Bo                     |                            | C/N            | L                                    | at                  | °              | <u> </u> |          | Local                   | JIIU LO                |                 |                     |                        |                              |  |
| SW 1/4   | , r 10 e    | Lon           |           | °                             | <u> </u>                   |                |                                      | Feet                | $\Box$ s       |          | Feet W   |                         |                        |                 |                     |                        |                              |  |
| Facility ID 11312532   | 20          |               | I .       | County<br>Dane                |                            |                | County Co                            | ode                 | Civil T<br>Mad |          | City/ or | Village                 |                        |                 |                     |                        |                              |  |
| Sample   |             |               |           | Dune                          |                            |                | 13                                   | Τ                   | Iviad          |          | Τ        |                         | Soil                   | Prope           | erties              |                        |                              |  |
|  | s           | t t           |           | Soil/                         | Rock Descrip               | ption          |                                      |                     |                |          |          | o.                      |                        |                 |                     |                        |                              |  |
| r<br>Pe<br>Att.  | ount        | n Fe          |           | And C                         | Geologic Orig              | in For         |                                      | S                   |                |          |          | essiv<br>h              | 9 _                    |                 | ty                  |                        | ents                         |  |
| Number<br>and Type<br>Length Att. &<br>Recovered (in)                        | Blow Counts | Depth In Feet |           | Ea                            | ach Major Ur               | nit            |                                      | USC                 | Graphic<br>Log | Well     | PID/FID  | Compressive<br>Strength | Moisture<br>Content    | Liquid<br>Limit | Plasticity<br>Index | P 200                  | RQD/<br>Comments             |  |
|  |             | -             | TOPSO     | OIL, organic ric              | ch, black, no o            | odor           |                                      |                     | 71 1/2         |          |          | 0 01                    |                        |                 |                     |                        |                              |  |
|  |             |               |           |                               |                            |                |                                      |                     | 11 11 1        |          |          |                         |                        |                 |                     |                        |                              |  |
| SILTY LEAN CLAY (CL), slight plastic   |             |               |           |                               |                            |                | ellowish                             |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
| brown (10YR 5/6), no odor, dry going to most stiff going to soft with depth. |             |               |           |                               |                            | ng to moist a  | it 3.5' bgs,                         |                     |                |          | 0.0      | 2                       |                        |                 |                     |                        | 3-5                          |  |
| SS 24  |             | -4            |           |                               |                            |                | CL                                   |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
| 2 24   |             | _             |           |                               |                            |                |                                      |                     |                |          | 0.0      | 1.25                    |                        |                 |                     |                        | 5-7                          |  |
| 2<br>SS 24<br>24   |             | -6            |           |                               |                            |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
|  |             | _             | SILT V    | WITH SAND (<br>(10YR 5/8), no | ML), fine gra              | nined, yellow  | rish                                 | ML                  |                |          |          |                         |                        |                 |                     |                        |                              |  |
| 3 24<br>SS 24  |             | -8            | SILTY     | LEAN CLAY<br>(10YR 5/6), no   | (CL), slight               | plasticity, ye | ellowish                             | CL                  |                |          | 0.0      | 1.25                    |                        |                 |                     |                        | 7.5-9.5                      |  |
| 33 24  |             |               | SAND      | WITH SILT (                   | SP), fine grai             | ned, trace gr  | avel,                                | 1                   | 1444           |          |          |                         |                        |                 |                     |                        |                              |  |
| 4  24  |             | -<br>-10      | yellowi   | ISH Drown (10 Y               | K 3/6), 110 000            | or, ary, 100se | ;.                                   |                     |                |          |          |                         |                        |                 |                     |                        | 10.12                        |  |
| 4<br>SS 24<br>18   |             | -             |           |                               |                            |                |                                      |                     |                |          | 0.0      |                         |                        |                 |                     |                        | 10-12                        |  |
|  |             | _<br>12       |           |                               |                            |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
| 5 24<br>SS 18  |             | - 12          | sand w    | ith silt, same as             | above.                     |                |                                      |                     |                |          | 0.0      |                         |                        |                 |                     |                        | 12.5-14.5                    |  |
| SS 18  |             | - 14          |           |                               |                            |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
|  |             | 14<br>        |           |                               |                            |                |                                      | SP                  |                |          |          |                         |                        |                 |                     |                        |                              |  |
| 6 24<br>SS 12  |             | _             |           |                               |                            |                |                                      |                     |                |          | 0.0      |                         |                        |                 |                     |                        | 15-17                        |  |
| 33 12  |             | -16           |           |                               |                            |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
| 7 12 24  |             |               | sand w    | ith silt, same as             | above.                     |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        | 17.5-19.5                    |  |
| 7<br>SS 24<br>12   |             | —18<br>—      |           |                               |                            |                |                                      |                     |                |          | 0.0      |                         |                        |                 |                     |                        | 17.3-19.3                    |  |
|  |             |               |           |                               |                            |                |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
|  |             | -20           |           |                               |                            |                |                                      |                     |                | pa t     | 1        |                         |                        |                 |                     |                        |                              |  |
| I hereby certif  | y that t    | he info       | rmation c | on this form is               |                            | T-1            |                                      |                     |                |          |          |                         |                        |                 |                     |                        |                              |  |
|  |             |               |           |                               |                            | 110            | C Environ<br>Heartland               |                     |                |          |          |                         |                        |                 |                     |                        | 608-826-3600<br>608-238-7156 |  |

Form 4400-122A

| Boring Num  | ber         | MW-29D Use only as an attachment to Form 4400-122. Page 2 of |  |    |                                   |         |                         |                     |                 |                     |       | 2                |
|---|-------------|--|--|----|-----------------------------------|---------|-------------------------|---------------------|-----------------|---------------------|-------|------------------|
| Sample  |             |  |  |    |                                   |         |                         | Soil                | Prope           | erties              |       |                  |
| Number<br>and Type<br>Length Att. &<br>Recovered (in) | ıts         | eet  | Soil/Rock Description  |    |                                   |         | ve                      |                     |                 |                     |       |                  |
| er<br>/pe<br>1 Att                                    | Cour        | In F   | And Geologic Origin For  | S  | .c. E                             |         | ressi<br>th             | ıre                 | _               | ity                 |       | ents             |
| Number<br>and Type<br>Length At<br>Recovered          | Blow Counts | Depth In Feet  | Each Major Unit  | SC | Graphic<br>Log<br>Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plasticity<br>Index | P 200 | RQD/<br>Comments |
| 8 24  | В           |  | SAND WITH SILT (SP), fine grained, trace gravel,   | D  |                                   | 0.0     | 0 2                     | Z O                 | i i             | Pl<br>Ir            | Ь     | 20-22            |
| 8 24<br>SS 6  |             | _  | yellowish brown (10YR 5/6), no odor, dry, loose.   |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -22  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -  | increasingly more present. Split spoon unable to be  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | - 24   | sand with silt, same as above, dolostone gravel becoming increasingly more present. Split spoon unable to be advanced due to formation stiffness. Drillers switch from 11.25" HSA to 6" air rotary due to difficult drilling conditions. |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -24<br>-   | conditions.  | SP |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -26  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | 28   |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  | BEDROCK, non-competent bedrock encountered at 29'  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -30  | BEDROCK, non-competent bedrock encountered at 29' bgs, drillers pull out and advance 11.25" HSA to 29' bgs to avoid boring blow out and collapse during air rotary.  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             |  | Cuttings recovered are fine sand and dolostone mixture.  |    | · · · · · ·     <b>▼</b>          |         |                         |                     |                 |                     |       |                  |
|   |             | -32  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | - 52   |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | <del>-34</del>   |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  | bedrock, same as above.  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -36  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _38  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -40  | BEDROCK, sandstone, drillers indicate bedrock has  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | Ē  | become more competent then 29-39' bgs.   |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -<br>42  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -<br>44  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _ 44   |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _  | bedrock, same as above.  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | <del> 46</del>   |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             |  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -48  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | -  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             | _50  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             |  | Boring terminated at 50.5' bgs (1/15/2018).  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             |  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   |             |  |  |    |                                   |         |                         |                     |                 |                     |       |                  |
|   | 1           |  |  |    |                                   |         |                         |                     |                 |                     |       |                  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Bya Dald Ent

36

ARCADIS

126 N. Jefferson St., Suite 400 Milwaukee, WI (414) 276-7742

|                    |                                |             | <u>!</u>      |                              | /Wastewater<br>on/Redevelop |             | Vaste N<br>Other |          | ement [        | 3               |            |                         |        |                 |                  |                          |                              |
|--------------------|--------------------------------|-------------|---------------|------------------------------|-----------------------------|-------------|------------------|----------|----------------|-----------------|------------|-------------------------|--------|-----------------|------------------|--------------------------|------------------------------|
|                    |                                |             |               |                              |                             |             |                  |          |                |                 |            |                         |        |                 | Page _           | 1                        | _ of1_                       |
|                    | Project N                      |             | / ^^1         | 283.0010.00002               |                             |             | Licens           | se/Peri  | nit/Mon        | itoring N       | lumber     |                         | В      | _               | Number<br>V-2D   | r                        |                              |
|                    |                                |             |               | chief (first, last) and Firm |                             |             | Date I           | Drilling | Started        | 1               | Date (     | Drilling C              | omple  |                 | Drilling         |                          |                              |
|                    | me To                          |             |               | Last Name Sch                | melfeldt,                   | /Schultz    |                  |          | 7/201          | - 1             |            | 0/28/                   |        |                 |                  | -                        | Rotary                       |
|                    | Boart I<br>Jue Well            |             | <u>rear</u>   | DNR Well ID No.              | Well Name                   | 2           | Final            | Static   | Water Le       | evel            |            | e Elevati               |        |                 | Boreh            | ole D                    | iameter                      |
| Local G            | rid Origin                     | <u> </u>    | estimat       | ted: 🔲 ) or Boring Locati    |                             | D/2D2       |                  |          | Fee            |                 |            | 7.57<br>rid Loca        |        | t MSL           | 12*<br>10*       | to 35'<br><u>to 14</u> 2 | ia <b>me</b> ter<br>' inches |
| State P            | lane                           | 40013       | 1.34          | N, 2144076.66                | E s[                        |             | Lat              |          |                |                 | LOCUIC     | ino coca                |        | N               |                  |                          | ΠE                           |
| Facility           | 1/4 of                         |             | 1/4 of        | Section,T<br>ounty           | N,R                         | County Code |                  |          | Civil Town     | r(/City)o       | - Villa au |                         | et 🗆   | s _             |                  |                          | Feet W                       |
|                    | 31253                          | 320         |               | Dane                         |                             | 13          | e<br>            | _  `     | LIVII IOW      | Mad             | ison       | 2                       |        |                 |                  |                          |                              |
| Sam                | ple                            |             |               |                              |                             |             |                  |          |                |                 |            |                         | Soil F | rope            | rtiės            |                          |                              |
|                    | .&<br> (in)                    | ıts         | eet           |                              | ck Description              |             |                  |          |                |                 |            | ive                     |        |                 |                  |                          | <u>8</u>                     |
| ber<br>Jype        | th All                         | Blow Counts | Depth in Feet |                              | ologic Origin<br>ajor Unit  | For         |                  |          | įĘ             | am              | QI:        | press<br>gth            | ture   | ס               | .u               | 0                        | ,<br>ment                    |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow        | Dept          |                              |                             |             | ļ                | USCS     | Graphic<br>Log | Well<br>Diagram | @DFID      | Compressive<br>Strength | Mois   | Liquid<br>Limit | Plastic<br>Limit | P 200                    | RQD/<br>Comments             |
| 1                  |                                |             | 0             | 0-142'/<br>Blind drill.      |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | - ·           | Billio Grill.                |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             | İ                |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             | }                |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | 142           | Bedrock @ 27.0'              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             |               |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | 144           |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | _             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             |               |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | _             |                              |                             |             |                  |          |                |                 |            |                         |        | ,               |                  |                          |                              |
|                    |                                |             | - 146         | i i                          |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             |               |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | - 148         |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | F             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | -             |                              |                             |             | ľ                |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | ١             |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
|                    |                                |             | - 150<br>-    |                              |                             |             |                  |          |                |                 |            |                         |        |                 |                  |                          |                              |
| l hereb            | y certify                      | that th     | ie info       | I<br>rmation on this form is | true and co                 |             |                  |          | knowle         | dge.            |            |                         |        |                 | <u> </u>         |                          |                              |
| Signatu            | re                             | 1           |               | 1                            | _                           | Firm        | ARC/<br>126 N    | V. Jeff  | erson :        | St., Suit       | e 400      |                         |        |                 |                  |                          | <del></del>                  |
| _ \$P              | May                            | W           | <u>V</u>      | IN                           |                             |             | Milw             | auke     | e,WI (4        | 114) 27         | 6-774      | 2                       |        |                 |                  |                          |                              |

|                    |                                |             | <u>i</u>      | Route to: Watershed/Wastewater Remediation/Redevelopment                             |                | e Manago<br>r 🔲    | ement [                            |                    |                           |                         |                     |                 |                  |  |                         |
|--------------------|--------------------------------|-------------|---------------|--|----------------|--------------------|------------------------------------|--------------------|---------------------------|-------------------------|---------------------|-----------------|------------------|--|-------------------------|
|                    |                                |             |               |  |                |                    |                                    |                    |                           |                         |                     | ı               | Page _           | 1  | _ of2_                  |
| Facility/          |                                |             | ——<br>Kipp    | /WI001283.0001.00004   | Lic            | ense/Per           | mit/Mor                            | iitoring N         | Number                    |                         | В                   |                 | lumbe            |  |                         |
| _                  | -                              |             |               | chief (first, last) and Firm   | Da             | te Drilling        | Startec                            |                    | Date (                    | Orilling C              | omple               | ted             | Drilling         |  |                         |
|                    |                                | eaufoi      |               | Last Name Jones<br>g & Associates, Inc.  |                | 02/2               | 4/12                               |                    | 0                         | 2/24/                   | 12                  |                 |                  | ıger   | w Stem                  |
| WI Uniq            |                                |             | T             | DNR Well ID No. Well Name  | Fi             | nal Static         | Water L                            | evel               | Surfac                    | e Elevati               | on                  |                 | Boreh            | ole D  | ia <b>me</b> ter        |
| Local Cri          | d Origin                       | <u> </u>    | artima:       | red: 🔲 ) or Boring Location 🔲  | _              |                    | Fee                                | et .               | l ocal G                  | irid Loca               |                     | t MSL           | <u>8.</u>        | <u> 25                                    </u> | inches                  |
| State Pl           | ane                            | · 🗀 "       | esuma         | N, E S <b>□</b> /C □   |                | Lat                |                                    |                    | Cocarc                    | inu Loca                |                     | N               |                  |  | □E                      |
| <u>NW</u>          | 1/4 of                         | SW          |               |  |                | ng                 |                                    | <i></i>            |                           |                         | et 🗆                | s _             |                  |  | Feet W                  |
| Facility I         | o<br><b>2532</b>               | 0           |               | unty Cour<br>Dane  | nty Code<br>13 | ,                  | Civil Tow                          | m/City/o<br>Mad    | r Village<br>I <b>son</b> | 2                       |                     |                 |                  |  |                         |
| Sam                |                                |             |               |  |                | T                  | Ţ <u></u>                          |                    |                           |                         | Soil F              | rope            | rties            |  |                         |
|                    | k<br>in)                       |             |               | Soil/Rock Description  |                |                    |                                    |                    |                           | e e                     |                     | •               |                  |  |                         |
| # g                | All. 8                         | ount        | in Fe         | And Geologic Origin For<br>Each Major Unit   |                |                    | ا                                  | E                  |                           | essi                    | 말눈                  |                 |                  |  | ents                    |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts | Depth in Feet | Each Major Offic   |                | USCS               | Graphic<br>Log                     | Well<br>Diagram    | (PID)/FID                 | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | 200  | RQD/<br>Comments        |
| 1                  |                                | B           | 0             | 0-0.5′/  |                | Asphalt            | ত এ                                | ۵۶                 |                           | <u> </u>                | Σὔ                  | ŠŠ              | P I              | ┛  | <u> </u>                |
|                    |                                |             | -             | Asphalt with coarse gravel base.   |                | J CL               | Jai Jar Ja                         |                    |                           | -                       | _                   |                 |                  |  | 0- <b>7</b> °           |
| 2                  |                                |             | <u> </u>      | 0.5-7.07/  |                |                    | ોમાં ફિલ્મોફ<br>ફેર્સ ફેર્માફ      |                    |                           |                         |                     |                 | '                |  | h <b>ydro</b> excavated |
|                    |                                |             | _             | Clay: Dark yellowish brown (10 YR 4/6)<br>trace very fine sand, trace to little orga |                |                    | ોમાં ફિલ્લોફ<br>ફિલ્લોફિલ ફિલ્લોફ  |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | ١,            | sticks), medium plasticity, soft (HP $= 1$ .   | 5-2), orang    |                    | ોકાં ફિંગ ફિં<br>ફિંમા ફિંગ ફિં    |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | -2            | gray and black mottling, moist, no odo   | or.            |                    | lei lei le<br>lei lei le           |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | L             |  |                |                    | DATE OF                            |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | L             |  |                |                    | lei lei le<br>lei lei le           |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | L             |  |                |                    | lai iai ia<br>Iai iai ia           |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | -4            |  |                |                    | lai lai la<br>lai lai la           |                    | ł                         |                         |                     |                 |                  |  |                         |
|                    |                                |             | -             |  |                |                    | ોન ફેન ફેન<br>ફિલ્લોનો ફેન         |                    | 1                         |                         |                     |                 |                  |  |                         |
|                    |                                |             | -             |  |                |                    | 14 14 14<br>14 14 14               |                    | 1                         |                         |                     |                 |                  |  |                         |
|                    |                                |             | <u> </u>      |  |                |                    | શિંશીઓ ફે                          |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | _             |  |                |                    | सि सि है<br>सि सि है               |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | -6            |  |                |                    | हित्र हित्र है।<br>हित्र हित्र है। |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                | ·           |               |  |                |                    | શિલ્લોના ફ્રિક<br>ફિલ્લોના ફ્રિક   |                    |                           | 1                       |                     |                 |                  |  |                         |
| 3                  | 19.2                           | 3444        | -             | 7.0-9.0′/  |                | CL                 | lei jei je<br>lei jei je           |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                |             | L             | 0-1.6' Clay: Dark yellowish brown (10 \  |                |                    | lei lei le<br>lei lei le           |                    | 1.35                      |                         |                     |                 |                  |  |                         |
| W                  |                                |             | -8            | some silt, trace very fine sand, trace to<br>organics (roots/sticks), medium plastic |                | ام                 | lai iai ia<br>Iai iai ia           |                    |                           |                         |                     |                 |                  |  |                         |
| - 1/1              |                                |             | _             | = 1.5-2), orange, gray and black mottli  |                | `                  | let let le                         |                    |                           |                         |                     |                 |                  |  |                         |
| L                  |                                |             | F             | no odor.   |                |                    | सि कि कि<br>सि कि कि               |                    |                           |                         |                     |                 |                  |  |                         |
| 4                  | 24                             | 3323        | -             | 9.0-11'/   |                | CL                 | स्य स्थाप्त<br>स्थापित             |                    | 2.48                      |                         |                     |                 |                  |  |                         |
| W                  |                                |             | <u> </u>      | 0-0.2' Clay: Same as above.<br>0.2-1.3' Sand: Dark yellowish brown (1)               | 0 YR 4/6).     | SM                 |                                    |                    |                           |                         |                     |                 |                  |  |                         |
| 1                  |                                |             | 10            | fine to very fine, little silt, trace subang   | ular grave     |                    |                                    |                    |                           |                         |                     |                 |                  |  |                         |
| I hereby           | / certify                      | that th     | info          | up to 1/2", trace (3) 1/4" clay lenses, poor mation on this form is true and correct |                | <u>'   </u>        | lili fiili<br>knowle               | l<br>dae.          | L                         | <u> </u>                | l                   |                 |                  |  |                         |
| Signatur           | e                              |             |               | _  | Firm AF        | CADIS              |                                    |                    |                           |                         |                     |                 |                  |  |                         |
|                    |                                | -<br>داحت   | - 1           |  | 12<br>  Mi     | 6 N. Jef<br>Iwauke | ierson<br>e, Wl (                  | วณ, วนใ<br>414) 27 | ιe 400<br>76-774          | 2                       |                     |                 |                  |  |                         |

| Sam                | ple                            |                      |                        |  |                |   |                 |         |                         | Soil P              | operti          | es               |       |      |
|--------------------|--------------------------------|----------------------|------------------------|--|----------------|---|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------|
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts          | Depth in Feet          | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS           | Graphic<br>Log                          | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/ |
|                    | 15.6                           | 7655                 | -                      | moist, no odor. 1.3-1.5' Clay: Dark yellowish brown (10 YR 4/4), some silt, some coarse sand, little subangular to subround gravel up to 1/4", mostly 1/8", medium   | SP<br>CL<br>ML |   |                 | 160     |                         |                     |                 |                  |       |      |
|                    | 13.0                           | , 0 3 3              | <b>-</b> 12            | plasticity, orange and gray mottling, moist, no<br>odor.<br>1.5-1.8' Sand: Dark yellowish brown (10 YR 4/6)  | SM-            |   |                 | 100     |                         |                     |                 |                  |       |      |
| 5                  | 19.2                           | 2313                 | 14                     | very fine to fine grained, well sorted, heavy iron<br>staining, moist, no odor.<br>1.8-2.0' Clay: Yellowish brown (10 YR 5/4), some<br>silt, trace very fine sand, trace organics, high<br>plasticity, soft (HP - 1-1.5), moist, no odor.                        | SM-<br>SM-     |   |                 | 220     |                         |                     |                 |                  |       |      |
|                    | 18                             | 3345                 | -                      | 1-13'/<br>0-0.1'Chert Rock.<br>0.1-0.3'Silt: Gray (10 YR 5/1) some very fine sand,   | CM             |   |                 | 40.78   |                         |                     |                 |                  |       |      |
|                    | 10                             | 3343                 | -<br>16<br>            | race rounded gravel pieces up to 1/2" black staining, slight odor, moist.  0.3-0.4' Sandstone, rock.  0.4-1.3' Sand: Light yellowish brown (10 RY 6/4), very fine, little silt, little subround to subangular gravel up to 1", poorly sorted, moist, no odor.    | SM-<br>SW      |   |                 | 10.70   |                         |                     |                 |                  |       |      |
| 8                  | 13.2                           | WH for<br>12"<br>5 4 | -<br>-<br>- 18<br>-    | 13-15'/ 0-1.6' Sand: Light yellowish brown (10 RY 6/4), very fine, little silt, little subround to subangular gravel up to 1", poorly sorted, moist, no odor. 15-17'/ 0-1.5' Sand: Light yellowish brown (10 RY 6/4),  | SM-<br>SW      |   |                 | 1.78    |                         |                     |                 |                  |       |      |
| -                  |                                |                      | -<br>-<br>-<br>-<br>20 | very fine, little silt, little subround to subangular gravel up to 1", poorly sorted, wet, no odor.  17-19"/ 0-1.1' Sand: Light yellowish brown (10 RY 6/4), very fine, little silt, little subround to subangular gravel up to 1", poorly sorted, wet, no odor. |                | 5 T 0 T 0 T 0 T 0 T 0 T 0 T 0 T 0 T 0 T |                 |         |                         |                     |                 |                  |       |      |
|                    |                                |                      | -<br>-<br>-            | EOB @ 19'  |                |   |                 |         |                         |                     |                 |                  |       |      |
|                    |                                |                      | - 22<br>-<br>-         | ¥-   |                |   |                 |         |                         |                     |                 |                  |       |      |
|                    |                                | į                    | -<br>- 24              |  |                |   |                 |         |                         |                     |                 |                  |       |      |
|                    |                                |                      | -<br>-<br>-<br>- 26    |  |                |   |                 |         |                         |                     |                 |                  |       |      |
|                    |                                |                      | -                      |  |                |   |                 |         |                         |                     |                 |                  |       |      |
|                    |                                | İ                    | - 28                   |  |                |   |                 |         |                         |                     |                 |                  |       |      |

|   |              | <u> </u>      | Route to: Watershed/Wastewater Remediation/Redevelopme                         |              | te Manag<br>er 🔲 _ |                            | ]               |           |                         |                     |               |                  |          |                         |
|---|--------------|---------------|--|--------------|--------------------|----------------------------|-----------------|-----------|-------------------------|---------------------|---------------|------------------|----------|-------------------------|
|   |              |               |  |              |                    |                            |                 |           |                         |                     | ı             | Page _           | 1        | _ of2_                  |
| Facility/Project                                      |              | Kinn          | /WI001283.0001.00004   | Li           | cense/Pei          | mit/Mor                    | itoring l       | Number    |                         | В                   | oring N       | lumbei<br>C'     | VE -     | 3                       |
|   |              |               | chief (first, last) and Firm   | Da           | ate Drillin        | g Started                  |                 | Date I    | Orilling C              | omple               | ted           | Drilling         |          |                         |
| First Name B  | eaufor       | rd            | Last Name Jones  |              |                    | 4/12                       |                 |           | 2/24/                   | -                   |               | Ho               | ollo     | w Stem                  |
| Firm Giles I  |              |               | g & Associates, Inc.  DNR Well ID No.   Well Name                              |              |                    |                            |                 |           |                         |                     | $\dashv$      |                  | ıge      |                         |
| wi onique weii  | NO.          |               | DIAN MEILID NO.  | []           | inal Statio        | . water Li                 |                 | Surrac    | e Elevati               |                     | t MSL         | 8.               |          | iameter<br>inches       |
| Local Grid Origi                                      | n 🔲 (        | estimat       | ted: ( ) or Boring Location (  | C□/N□        | 1-4                |                            |                 | Local G   | irid Loca               | tion                |               |                  |          |                         |
|   |              |               | N, E S□/⁄<br>Section 5 _,T 7 N,R 10  | . [X] F [    | Lat<br>ong         |                            |                 |           | E-                      | et 🗆                |               |                  |          | □E<br>Feet □ W          |
| Facility ID   |              |               |  | ounty Code   | Jing               | Civil Tow                  | n/City/c        | r Village |                         | et 🗀                | 3_            |                  |          | reet LIW                |
| 11312532  | 20           | $\perp$       | Dane   | 13           | <u></u>            |                            | Mad             | ison      |                         |                     |               |                  |          |                         |
| Sample  | -            |               |  |              |                    |                            |                 |           | ļ                       | Soil F              | rope          | rties<br>I       |          |                         |
| % (r)   | Į ž          | eet           | Soil/Rock Description  |              |                    |                            |                 |           | i,ke                    |                     |               |                  |          | ا ي                     |
| ype<br>ype<br>th All                                  | 5            | i             | And Geologic Origin For<br>Each Major Unit                                     | r            |                    | i ii                       | an<br>B         | ₽         | oress<br>gth            | ar i                | -             | ا ن              |          | ment                    |
| Number<br>and Type<br>Length All. &<br>Recovered (in) | Blow Counts  | Depth in Feet | ·  |              | USCS               | Graphic<br>Log             | Well<br>Diagram | PID/FID   | Compressive<br>Strength | Moisture<br>Content | iguí,<br>imit | Plastic<br>Limit | P 200    | RQD/<br>Comments        |
| 1   | <del> </del> | 0             | 0-0.5′/  |              | Asphal             | 1                          |                 |           | 0.8                     | 20                  |               |                  | <u>.</u> | <u> </u>                |
| 2   |              | †             | Asphalt with coarse gravel base.   |              | اردل               | lei jai ja                 |                 |           |                         |                     |               |                  |          | -0-6'<br>hydroexcavated |
|   |              |               | 0.5-5.0'/<br>Clay: Dark yellowish brown (10 YR 4,                              | /6) somo sil | ı                  | ÎNȚALÎA<br>ÎNȚĂNÎA         |                 |           |                         |                     |               |                  |          |                         |
|   |              |               | trace very fine sand, trace to little or                                       |              |                    | Dan Dan D<br>Dan Dan D     |                 |           |                         |                     |               |                  |          |                         |
| 48  | }            | -2            | sticks), medium plasticity, soft (HP =   |              | ge,                | TALLANTA<br>ALLANTA        |                 |           |                         |                     |               |                  |          |                         |
| W   |              |               | gray and black mottling, moist, no or  | aor.         |                    | ALLAL IA<br>ALLAL IA       |                 |           |                         |                     |               |                  |          |                         |
|   |              |               |  |              |                    | [[et ]et ]e                |                 |           |                         |                     |               |                  |          |                         |
|   |              | -             |  |              |                    | [A] [A] [A]<br>[A] [A] [A] |                 | ľ         |                         | 1                   |               |                  |          |                         |
|   |              | -             |  |              |                    | Ter ter te                 |                 |           | İ                       |                     |               |                  |          |                         |
|   |              | -4            |  |              |                    | [8] [8] [8]<br>[8] [8] [8] |                 |           |                         |                     |               |                  |          |                         |
|   |              | -             |  |              |                    | er der de                  |                 |           |                         | 1                   |               |                  |          |                         |
|   |              | ₽             |  |              |                    |                            |                 |           |                         |                     |               |                  |          |                         |
| 3   |              | ⊦             | 5.0-6.0'/  |              | SP                 |                            |                 | hydro     |                         |                     |               |                  |          |                         |
|   |              | ┝             | Sand: Yellowish brown (10 YR 5/6), vegrained, trace silt, trace subround to    | •            | .                  |                            |                 |           |                         |                     |               |                  |          |                         |
| 4 16.8  | 2344         | -6            | gravel up to 1", moderately sorted m   |              |                    |                            | 1               | 1.38      |                         |                     |               |                  |          |                         |
| l l   |              | <b> </b>      | 6.0-8.0'/  |              |                    |                            |                 |           |                         |                     |               |                  |          |                         |
| W   |              | ┢             | Sand: Yellowish brown (10 YR 5/6), v<br>grained, trace silt, trace subround to |              | r                  |                            |                 |           |                         |                     |               |                  |          |                         |
|   |              | F             | gravel up to 1", moderately sorted m   |              |                    |                            |                 |           | :                       |                     |               |                  |          |                         |
|   |              | Γ.            |  |              |                    |                            |                 |           | ]                       |                     |               |                  |          |                         |
| 5 18  | 4465         | 8             | 8.0-10.0′/   | _            | SP                 |                            |                 | 0.78      |                         |                     |               |                  |          |                         |
|   |              |               | Sand: Yellowish brown (10 YR 5/6), v grained, trace silt, trace subround to    |              | ,                  |                            |                 |           |                         |                     |               |                  |          |                         |
| W   |              | _             | gravel up to 1, moderately sorted m  |              |                    |                            |                 |           |                         |                     |               |                  |          |                         |
| V I   |              | L             |  |              |                    |                            |                 | 1         |                         |                     |               |                  |          |                         |
|   | ļ            | 10            | 100400   |              |                    |                            |                 |           |                         |                     |               |                  |          |                         |
| 6 20.4  | 3787         | L             | 10.0-12.0'/<br>Sand: Yellowish brown (10 YR 5/6), v                            | verv fine    | SP                 |                            |                 | 1.45      |                         |                     |               |                  |          |                         |
|   | y that th    | e info        | mation on this form is true and corre  | ct to the be |                    |                            | dge.            | •         | •                       |                     |               |                  |          |                         |
| Signature   |              |               | <i>y</i> **  |              | RCADIS<br>26 N. Je |                            | St., Sui        | te 400    | ١                       |                     |               |                  |          |                         |
| -   | ~            |               |  | M            | lilwauk            | e,Wi (                     | 414) 2          | 76-774    | 2                       |                     |               |                  |          |                         |

Boring Number SVE-3

Page 2 **of 2** 

| Sam                | nle             |                      |                          |   |      |                |                 |         |                         | Soil Pr               | opertie | 25 |       |                  |
|--------------------|-----------------|----------------------|--------------------------|---|------|----------------|-----------------|---------|-------------------------|-----------------------|---------|----|-------|------------------|
| Number<br>and Type | Length All. & n | Blow Counts          | Depth in Feet            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | uscs | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | . Moisture<br>Content |         |    | P 200 | RQD/<br>Comments |
|                    |                 |                      |                          | grained, trace silt, trace subround to subangular<br>gravel up to 1," moderately sorted moist, no odor.   |      |                |                 | :       |                         |                       |         |    |       |                  |
| 7                  | 20.4            | 6799                 | -<br>-                   | 12-14'/ Sand: Yellowish brown (10 YR 5/6), very fine grained, trace silt, trace subround to subangular gravel up to 1", moderately sorted moist, no odor. | SP   |                |                 | 0.70    |                         |                       |         |    |       |                  |
| 8                  | 13.2            | 7 11<br>5 4          | -<br>-<br>-              | 14-16'/ Sand: Yellowish brown (10 YR 5/6), very fine grained, trace silt, trace subround to subangular gravel up to 1", moderately sorted moist, no odor. |      |                |                 | 1.82    |                         |                       |         |    |       |                  |
| 9                  |                 | 8857                 | -<br>-<br>-<br>-         | 16-18'/ Sand: Yellowsih brown (10 YR 5/6), very fine grained, trace silt, trace subround to subangular gravel up to 1", wet, no odor.                     | SP   |                |                 | 3.21    |                         |                       |         |    |       |                  |
| 10                 | 15.6            | 446                  | - 20                     | 18-20"/ Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace subround to subangular gravel up to 1", wet no odor.                       | SM   |                |                 | 1.37    |                         |                       |         |    |       |                  |
| 11                 | 14.4            | WH for<br>12"<br>488 | - 22                     | 20-22'/ Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace subround to subangular gravel up to 1", wet no odor.                       | SM   |                |                 | 3.07    |                         |                       |         |    |       | =                |
|                    |                 |                      | -<br>-<br>-<br>-<br>- 24 | EOB @ 22'   |      |                |                 |         |                         |                       |         |    |       |                  |
|                    |                 |                      | -<br>-<br>-              |   |      |                |                 |         |                         |                       |         |    |       |                  |
|                    |                 |                      | - 26<br>-                |   |      |                |                 |         |                         |                       |         |    |       |                  |
|                    |                 |                      | 28<br>-<br>-             |   |      |                |                 |         |                         |                       |         |    |       |                  |

| State of Wisconsin              |
|---------------------------------|
| Department of Natural Resources |

Soil Boring Log Information Form 4400-122 Rev. 7-98

|                      |                                 |               | Ţ             | Route to: Watershed/W<br>Remediation.                  |               |               | Naste M<br>Other |                | ement [                   |                 |                |                         |                     |                 |                  |              |                  |
|----------------------|---------------------------------|---------------|---------------|--|---------------|---------------|------------------|----------------|---------------------------|-----------------|----------------|-------------------------|---------------------|-----------------|------------------|--------------|------------------|
|                      |                                 |               |               |  | ·             |               |                  |                |                           |                 |                |                         |                     | 1               | Page             | 1            | _ of2            |
| Facility/            |                                 |               | —–<br>Kipp    | <br>/Wl001283.0001.0                                   | 0004          |               | Licen            | se/Peri        | nit/Mon                   | itoring N       | lumber         |                         | В                   |                 | lumbe            |              |                  |
| _                    | Orilled By                      | : Name o      | of crew       | chief (first, last) and Firm                           | _             |               | Date             | Drilling       | Started                   |                 | Date [         | Orilling C              | omple               | ted             | Drilling         |              |                  |
| First Na             | me Bo                           | eaufo         | rd            | Last Name Jon  |               |               |                  | 02/2           | 4/12                      |                 | C              | 2/24/                   | 12                  |                 |                  |              | w Stem           |
| Wi Uniq              | ue Well                         | ingine<br>No. | ering         | g & Associates, Inc.                                   | Well Name     | <u> </u>      | Finai            | l Static       | Water Le                  | evel            | Surfac         | e Elevati               | on                  |                 |                  | ige<br>J     | iameter          |
|                      |                                 |               |               |  |               |               |                  |                | Fee                       | t               |                |                         | Fee                 | t MSL           |                  | <u>25</u>    | inches           |
| Local Gr<br>State Pl |                                 |               |               | ted:  ) or Boring Location<br>N,                       | TE SE         | ]/C  /N       | l Lat            | t              |                           |                 | Local G        | irid Loca               | tion                | N               |                  |              | □E               |
|                      |                                 |               |               | Section 5 ,T 7   |               | 10   X E      | Long             |                | •                         |                 |                | Fe                      | et 🗖                |                 |                  |              | Feet W           |
| Facility I           | D                               | _             | Co            | unty   |               | County Cod    |                  |                | Civil Tow                 | n/City/o        |                |                         |                     |                 |                  |              |                  |
|                      | 2532                            | 0             | $\perp$       | Dane   |               | 13_           |                  |                |                           | Mad             | ison<br>I      |                         | C = :1 F            | \               |                  |              |                  |
| Sam                  |                                 |               |               |  |               |               |                  |                |                           |                 |                |                         | SOII F              | rope            | rties            |              |                  |
|                      | f. &<br>d (in)                  | nts           | Feet          | Soil/Rock<br>And Geol                                  |               |               |                  |                |                           |                 | sive           |                         |                     |                 |                  | ıts          |                  |
| Number<br>and Type   | ith Al<br>vere                  | Blow Counts   | Depth in Feet | Each Majo  |               | 101           |                  |                | hic                       | ram             |                | pres                    | ture                | ᅙᆚ              | r ic             | <sub>0</sub> | mer              |
| Number<br>and Type   | Length All. &<br>Recovered (in) | Blow          | Dept          | :  |               |               |                  | USCS           | Graphic<br>Log            | Well<br>Diagram | PIDYFID        | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200        | RQD/<br>Comments |
| 1                    |                                 |               | 0             | 0-0.5'/  |               |               |                  | Asphalt        |                           |                 |                |                         |                     |                 |                  |              | 0-6'             |
| 2                    | <del></del> 77                  |               | L             | Asphalt with coarse gra                                | avel base.    |               |                  | CL             | lai lai la<br>lai lai lai |                 |                |                         |                     |                 |                  |              | Hydroexcavated   |
|                      |                                 |               | L             | 0.5-5.0'/<br>Clay: Dark yellowish br                   | own (10 Y     | R 4/6), some  | silt,            |                | DAT DAT DE<br>DAT DAT DE  |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | L             | trace very fine sand, tra                              | ce to little  | organics (re  | oots/            |                | TATE OF                   |                 |                |                         |                     |                 |                  |              |                  |
| 100                  |                                 |               | -2            | sticks), medium plastici<br>gray and black mottling    |               |               | ange,            |                | iai lai la<br>Iai lai la  |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | F             | ,                | <i>J</i> , 14 |               |                  |                | IAI ÎAI ÎA<br>IAI ÎAI ÎA  |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | F             |  |               |               |                  |                | lai jai ja<br>lai jai ja  |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | -             |  |               |               |                  |                | lai lai la<br>lai lai la  |                 |                |                         |                     |                 |                  |              |                  |
| - 11                 |                                 |               | F             |  |               |               |                  | 1              | ÎAÎ ÎAÎ ÎA<br>ÎAÎ ÎAÎ ÎA  |                 |                |                         |                     |                 |                  |              |                  |
| - 11                 |                                 |               | -4            |  |               |               |                  |                | A A Is                    |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               |               |  |               |               |                  |                | AL IAL IA<br>AL IAL IA    |                 |                |                         |                     |                 |                  |              |                  |
| 3                    |                                 |               | E             | 5.0-6.0'/  |               |               |                  | CNA            | IAC NO V                  |                 |                |                         | -                   |                 |                  |              |                  |
|                      | 1                               |               | L             | Sand: Yellowish brown                                  |               |               |                  | SW             |                           |                 |                |                         |                     |                 |                  |              | •                |
|                      |                                 |               | -6            | grained, little subround<br>to 1/2", mostly 1/8", some |               |               |                  |                |                           |                 |                |                         |                     |                 |                  |              |                  |
| 4                    | 18                              | 4714<br>17    | L             | no odor.   | ¢ siit, pooi  | iy sosted iii | 0130,            | SM-            |                           |                 | 0.58           |                         |                     |                 |                  |              |                  |
| W.                   |                                 |               | F             | 6.0-8.0'/  | (10)          | (D. F./6)     | £                | SW             |                           |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | ⊦             | 0-1.5' Sand, Yellowish b<br>grained, little subround   |               |               |                  |                |                           |                 |                |                         |                     |                 |                  |              |                  |
| - 1                  |                                 |               | -             | to 1/2", mostly 1/8", som                              | e silt, poor  | ly sorted m   | oist,            |                |                           |                 |                |                         |                     |                 |                  |              |                  |
| 5                    | 12                              | 5788          | -8            | no odor.<br>8.0-10.0'/                                 |               |               |                  | SM-            |                           |                 | 0.68           |                         |                     | -               |                  |              |                  |
|                      |                                 |               | ┝             | 0-2.0' Sand, Yellowish b                               |               |               |                  | sw             | 14.5                      |                 | 0.08           |                         | ŀ                   |                 |                  |              |                  |
|                      |                                 |               | ┢             | grained, little subround<br>to 1/2", mostly 1/8", som  |               |               |                  |                |                           |                 |                |                         |                     |                 |                  |              |                  |
| V                    |                                 |               | _             | no odor.   | 4,5           | ,             | ,                |                |                           |                 |                |                         |                     |                 |                  |              |                  |
|                      |                                 |               | $\Gamma_{10}$ |  |               |               |                  |                |                           |                 |                |                         |                     |                 |                  |              |                  |
| 6                    | 9.6                             | 8 12 13       | 10            | 10.0-12.0'/<br>0-0.8' Sand: Yellowish b                | arown /10     | VR 5/6) von   | ı fina           | SM-            |                           |                 | 1.03           |                         |                     |                 |                  |              |                  |
|                      |                                 | that th       | e infor       | mation on this form is to                              |               | rrect to the  | best o           | of my          | knowle                    | dge.            | L              |                         |                     |                 |                  |              |                  |
| Signatur             | e                               |               |               | · C  |               | Firm          |                  | ADIS<br>N. lef | ferson                    | St., Suit       | te <b>ፈ</b> በበ |                         |                     |                 |                  |              |                  |
|                      |                                 | へこ            |               |  |               |               | Milv             | vauke          | e, WI (                   | 414) 27         | 6-774          | 2                       |                     |                 |                  |              |                  |

| Boring N           | lumber ,                        | SVE           | -4                     |  |           |                |                 |         |                         |                     |                 | Page _           | 2     | of <u>2</u>      |
|--------------------|---------------------------------|---------------|------------------------|--|-----------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sam                | ple                             |               |                        |  |           |                |                 |         |                         | Soil Pr             | operti          | es               |       |                  |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts   | Depth in Feet          | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS      | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                 |               | -<br>-<br>-            | grained, little subround to subangular gravel up to 2", some silt, poorly sorted, moist, no odor.  |           |                |                 |         |                         |                     |                 |                  |       |                  |
| 7                  | 19.2                            | 699<br>12     | -<br>-<br>-            | 12-14'/ 0-1.6' Sand: Yellowish brown (10 YR 5/6), very fine grained, little subround to subangular gravel up to 2", some silt, poorly sorted, moist, no odor.          | SM-<br>SW |                |                 | 1.71    |                         |                     |                 |                  |       |                  |
| 8                  | 16.8                            | 17 13<br>11 8 | -<br>-<br>-<br>-16     | 14-16'/<br>0-1.4' Sand: Yellowish brown (10 YR 5/6), very<br>fine grained, little subround to subangular gravel<br>up to 2", some silt, poorly sorted, moist, no odor. | SM-<br>SW |                |                 | 2.11    |                         |                     |                 |                  |       |                  |
| 9                  | 19.2                            | 4557          | -<br>-<br>-<br>-       | 16-18'/ 0-1.6' Sand: Yellowish brown (10 YR 5/6), very fine grained, little subround to subangular gravel up to 2," some silt, poorly sorted, wet, no odor.            | SM-<br>SW |                |                 | 1.57    |                         |                     |                 |                  |       |                  |
|                    |                                 |               | - 20<br>22<br>22<br>24 | EOB @ 18'  |           |                |                 |         |                         |                     |                 |                  |       |                  |
|                    | 0.80                            |               | - 26<br>28             | 10   |           |                |                 |         |                         |                     |                 |                  |       |                  |

|                      |                                 |             | <u> </u>            | Route to: Watershed/Wastewater<br>Remediation/Redevelop                                 |               | Vaste N<br>Other |             | ment [                   | 1               | _         |                         |                     |              |                  |               |                         |
|----------------------|---------------------------------|-------------|---------------------|---|---------------|------------------|-------------|--------------------------|-----------------|-----------|-------------------------|---------------------|--------------|------------------|---------------|-------------------------|
|                      |                                 |             |                     |   |               |                  |             |                          |                 |           |                         |                     | F            | age _            | 1             | of                      |
| Facility/            | -                               |             | Kipp                | /WI001283.0001.00004  | ·             | Licen:           | se/Peri     | nit/Mon                  | itoring N       | lumber    |                         | В                   |              | lumber           |               |                         |
| •                    |                                 |             |                     | chief (first, last) and Firm  |               | Date I           | Drilling    | Started                  |                 | Date (    | Orilling C              | omple               | ted          | Drilling         |               |                         |
|                      |                                 | eaufoi      |                     | Last Name Jones<br>g & Associates, Inc.   |               | (                | 02/2        | 4/12                     |                 | 0         | 2/24/                   | 12                  |              |                  | )llo\<br>iger | v Stem                  |
| Wi Uniq              |                                 |             | EIIII               | DNR Well ID No. Well Name   | <del>:</del>  | Final            | Static      | Water Le                 | evel            | Surfac    | e Elevati               | on                  |              |                  |               | ia <b>me</b> ter        |
|                      |                                 |             |                     |   |               |                  |             | Fee                      |                 |           |                         |                     | t MSL        | <u>8.2</u>       | <u>25</u>     | inches                  |
| Local Gr<br>State Pl | id Origir<br>ane                |             | estima <sup>.</sup> | ted:  ) or Boring Location  | ]/c□/n□       | Lat              | :           |                          |                 | Local G   | irîd Loca               | tion                | N            |                  |               | □E                      |
| NW                   | 1/4 of                          | SW          | 1/4 of              | f Section <u>5</u> ,T <u>7</u> N,R  | 10 ⊠ E        | Long             |             |                          |                 |           | Fe                      | eet 🗆               |              |                  |               | — −<br>Feet □ w         |
| Facility I           | D                               | _           | Co                  | ounty   | County Cod    |                  | T           | ivil Tow                 | n/City/o        |           | 2                       |                     |              |                  |               |                         |
|                      | 12532                           | .0          | $\perp$             | Dane  | 13            |                  |             |                          | Mad             | ison      |                         | Soil F              | ropo         | rtioc            |               |                         |
| Sam                  |                                 |             |                     |   |               |                  |             |                          |                 |           |                         | 3011 F              | ropei        | ties             | $\neg$        |                         |
|                      | d (in)                          | nts         | Feet                | Soil/Rock Description And Geologic Origin   |               |                  |             |                          |                 |           | ssive                   |                     |              |                  |               | ats                     |
| Number<br>and Type   | ith Al                          | Blow Counts | Depth in Feet       | Each Major Unit   |               |                  | L/A         | hic                      | ram             | 윤         | pres<br>19th            | ture                | t ö          | ig +             | 200           |                         |
| Number<br>and Typ    | Length All. &<br>Recovered (in) | Blow        | Depi                |   |               |                  | USCS        | Graphic<br>Log           | Well<br>Diagram | (PID) FID | Compressive<br>Strength | Moisture<br>Content | Liqu<br>Limi | Plastic<br>Limit | P 2(          | RQD/<br>Comments        |
| 1_                   |                                 |             | 0                   | 0-0.5′/   |               |                  |             |                          |                 |           |                         |                     |              |                  |               | 0 <b>-6</b> '           |
| 2                    | _                               |             |                     | Asphalt with gravel bed.  |               |                  | CL          | 4   4   4<br> 4   4   4  |                 |           |                         |                     |              |                  |               | H <b>ydro</b> excavated |
|                      |                                 |             |                     | 0.5-6.0′/<br>Clay: Dark yellowish brown (10 Y   | R 4/6), some  | e silt,          |             | IAI IAI IA<br>IAI IAI IA |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | -                   | trace very fine sand, trace to little   | organics (re  | oots/            |             | lai lai la<br>Lai lai la |                 |           |                         |                     |              |                  |               |                         |
| li)                  |                                 |             | -2                  | sticks), medium plasticity, soft (HF gray and black mottling, moist, no                 |               | range,           |             | লিনিনি<br>লিনিনি         |                 |           |                         |                     |              |                  |               |                         |
| 100                  |                                 |             | F                   | g.a., a a   |               |                  |             | lei lei le<br>lei lei le |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | F                   |   |               |                  |             | iei iei ie<br>Iei iei ie |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | ┝                   |   |               |                  |             | [4] [4] [4<br>[4] [4] [4 |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | ┝                   |   |               |                  |             | IN IN IN                 |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | -4                  |   |               |                  |             | M M 1                    |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | ┢                   |   |               |                  |             | ति सि वि<br>सि सि वि     |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | r                   |   |               |                  |             | कि (कि कि                |                 | 1         |                         |                     |              |                  |               |                         |
| 1                    |                                 |             | ľ                   |   |               |                  |             | iai iai ia<br>Iai iai ia |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | _ <sub>6</sub>      |   |               |                  |             |                          |                 |           |                         |                     |              |                  |               |                         |
| 3                    | 24                              | 4611<br>15  | Ľ                   | 6.0-8.0'/   | (10 VD 4/6)   | -6               | ML          |                          |                 | 0.87      |                         |                     |              |                  |               |                         |
|                      |                                 | 13          | L                   | 0-0.2' Silt: Dark yellowish brown (<br>noncohesive, moist, no odor.                     | (10 YR 4/6),  | sort,            | SM-         |                          |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | -                   | 0.2-2.0' Sand: Dark yellowish brow  |               |                  | SW          |                          |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | F                   | very fine grained, little silt, little su<br>subround gravel up to 1, loose, m          |               |                  |             |                          |                 |           |                         |                     |              |                  |               |                         |
| 4                    | 24                              | 9887        | -8                  | 8.0-10.0′/  | 10101/110 041 |                  | SM-         | 2 22 2<br>5 4 5          |                 |           |                         | _                   |              |                  |               |                         |
| 4                    | 24                              | 9887        | F                   | 0-2.0' Sand, dark yellowish brown   | n (10 YR 4/6) | ,                | SW          |                          |                 | 1.37      |                         |                     |              |                  |               |                         |
|                      |                                 |             | F                   | very fine grained, little silt, little s  |               |                  | "           |                          |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | ┝                   | subround gravel up to 1", loose, m  | noist, no odd | or.              |             |                          |                 |           |                         |                     |              |                  |               |                         |
|                      |                                 |             | -                   |   |               |                  |             |                          |                 |           | ŀ                       |                     |              |                  |               |                         |
| 5                    | 12                              | 7837        | 10                  | 10.0-12.0′/   |               |                  | SM-         |                          |                 | 1.33      |                         |                     |              |                  |               |                         |
|                      |                                 | 20          | e info              | 10.0-12.0'/<br>0-1.0' Sand, dark yellowish brown<br>rmation on this form is true and co | (10 YR 4/6)   | , very           | SW<br>Stroy | cnowle                   | dae             |           |                         |                     |              |                  |               |                         |
| Signatu              |                                 | r criat til | CHIO                | impaon on this form is true and co  | Firm          | ARC              | ADIS        |                          |                 |           |                         |                     |              |                  |               |                         |
| _                    |                                 | -<br>-      | ٧,                  |   |               | 126              | N.Jef       | ferson                   | St., Suit       | te 400    | .7                      |                     |              |                  |               |                         |

| Boring N           | lumber                          | SVE         | -5   |  |           |                |                 |         |                         |                     | ı               | oage _           | 2     | of <u>2</u>      |
|--------------------|---------------------------------|-------------|--|--|-----------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sam                | ple                             |             |  |  |           |                |                 |         |                         | Soil P              | operti          | es               |       |                  |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts | Depth in Feet                                      | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS      | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                 |             | -<br>-<br>-  | fine grained, little silt, little subangular to sub-<br>round gravel up to 1", poorly sorted, loose, moist,<br>no odor.  |           |                |                 |         |                         |                     |                 |                  |       |                  |
| 6                  | 16.8                            | 1298<br>8   |  | 12-14"/ 0-1.4" Sand: Dark yellowish brown (10 YR 4/6), very fine grained, little silt, little subangular to sub round gravel up to 1", poorly sorted, loose, moist, no odor. | SM-<br>SW |                |                 | 1.58    |                         |                     |                 |                  |       |                  |
| 7                  | 24                              | 6 8 10<br>9 | -16  | 14-16'/ 0-2.0' Sand: Dark yellowish brown (10 YR 4/6), very fine grained, little silt, little subangular to sub round gravel up to 1", poorly sorted, loose, moist, no odor. | SM-<br>SW |                |                 | 1.46    |                         |                     |                 |                  |       |                  |
| 8                  | 24                              | 9 14 8<br>9 | -<br>-<br>-  | 16-18'/ 0-2.0' Sand: Dark yellowish brown (10 YR 4/6), very fine grained, little silt, little subangular to sub round gravel up to 1", poorly sorted, loose, moist, no odor. |           |                |                 | 1.77    |                         |                     |                 |                  |       |                  |
| 9                  | 24                              | 685<br>10   | <del>-</del><br>-<br>-                             | 18-20'/ 0-2.0' Sand: Dark yellowish brown (10 YR 4/6), very fine grained, little silt, little subangular to sub round gravel up to 1", poorly sorted, loose, wet, no odor.   | SM-<br>SW |                |                 | 1.81    |                         |                     |                 |                  |       |                  |
| •                  |                                 |             | - 20<br>-<br>-<br>-<br>- 22<br>-<br>-<br>- 24<br>- | EOB @ 20'  |           |                |                 |         |                         |                     |                 |                  |       |                  |
|                    |                                 |             | - 26<br>-<br>-<br>-<br>-<br>- 28<br>-              |  |           |                |                 |         |                         |                     |                 |                  |       |                  |

| State of Wisconsin              |
|---------------------------------|
| Department of Natural Resources |

## Soil Boring Log Information Form 4400-122 Rev. 7-98

|                      |                                 |             | <u> </u>   | Route to: Watershed/Wa                                    |               |   | aste M |          | ment [                           | ]                   |          |                         |                     |                 |                  |               |  |
|----------------------|---------------------------------|-------------|--|---|---------------|---|--------|----------|----------------------------------|---------------------|----------|-------------------------|---------------------|-----------------|------------------|---------------|--|
|                      |                                 |             |  |   | ·             |   |        |          |                                  |                     |          |                         |                     | 1               | Page             | 1             | _ of2                                    |
| Facility/            | -                               |             | Kipp   | /WI001283.0001.00   | 004           |   | Licens | se/Peri  | nit/Mon                          | itoring N           | lumber   |                         | В                   |                 | lumbei           |               |  |
| Boring E             |                                 |             |  | chief (first, last) and Firm                              |               |   | Date [ | Drilling | Started                          |                     | Date E   | Orilling C              | omple               | ted             | Drilling         |               |  |
|                      | me Be                           |             |  | Last Name Jone  | <u> </u>      | į                                       | (      | 02/2     | 5/12                             |                     | 0        | 2/25/                   | 12                  |                 |                  | ollov<br>ugei | w Stem                                   |
|                      | ue Well I                       |             | ering  | g & Associates, Inc. DNR Well ID No.                      | Well Name     |   | Final  | Static   | Water Le                         | vel                 | Surfac   | e Elevati               | on                  |                 |                  |               | ia <b>met</b> er                         |
|                      |                                 |             |  |   | _             |   |        |          | Fee                              | t                   |          |                         |                     | t MSL           | <u>.8.</u> 2     | <u> 25</u>    | inches                                   |
| Local Gr<br>State Pi |                                 |             | estima   | red: 🔲 ) or Boring Location<br>N,                         | _E S⊏         | ]/C□/N□                                 | Lat    | :        |                                  | 1                   | Local G  | irid Loca               | tion                | N               |                  |               | □E                                       |
|                      |                                 | SW          | 1/4 of   | Section <u>5</u> ,T <u>7</u>                              | N,R <u>1</u>  | <u>ㅇ </u> 뙴튀                            | Long   |          |                                  |                     |          | Fe                      | et 🗆                |                 |                  |               | Feet W                                   |
| Facility I           | D                               | _           | Co   | unty  |               | County Code                             |        | - 1      | ivil Tow                         | n/City/o            |          | 2                       |                     |                 |                  |               |  |
| Sam                  | 1253                            | 20          | <del>,                                    </del> | Dane<br>I   |               | 15                                      |        |          |                                  | Mad                 | ISOH     |                         | Soil F              | rope            | rties            |               |  |
| 35111                |                                 |             | l  | 5 115 1 5   |               |   |        |          |                                  |                     |          | 4)                      | 50111               | , ope           |                  | -             |  |
|                      | Length All. &<br>Recovered (in) | unts        | Depth in Feet                                    | Soil/Rock E<br>And Geolo                                  |               |   |        |          |                                  | _                   |          | Compressive<br>Strength | w                   |                 |                  |               | nts                                      |
| Number<br>and Type   | gth /                           | Blow Counts | 를<br>등<br>등                                      | Each Major  | r Unit        |   |        | S        | Graphic<br>Log                   | Well<br>Diagram     | PID)YFID | npre                    | Moisture<br>Content | ë ≓             | Plastic<br>Limit | 200           | RQD/<br>Comments                         |
| Nur                  | Len                             | 98          |  |   |               |   |        | USCS     | Gra<br>Log                       | Wel                 | (2)      | o str                   | ું હુ               | Liquid<br>Limit | Plasti<br>Limit  | P 2           |  |
| 1_                   |                                 |             | 0  | 0-0.5'/<br>'Asphalt with coarse grav                      | vel base      |   | _ ,    | Asphalt  | 2 2 2 - 2                        |                     |          |                         |                     |                 |                  |               | 0- <b>6</b> °<br>H <b>ydro</b> excavated |
| 2                    | **                              |             | -  | 0.5-4.5'/   | ver base.     |   | '      | CL       | ીમાં તેમાં તે<br>તેમાં તેમાં તે  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | -  | Clay: Dark yellowish bro                                  |               |   |        |          | ીમાં દેશ દેશ<br>તમાં તેમ દેશ     |                     | ]        |                         |                     |                 |                  |               |  |
|                      |                                 |             | F  | trace very fine sand, trace<br>sticks), medium plasticity |               |   |        |          | ÎNIÎNIÎN<br>ÎNIÎNIÎN             |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | -2   | gray and black mottling,                                  |               |   | ange,  |          | la la la<br>la la la<br>la la la |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | -  |   |               |   |        |          | lai Tai Ta                       |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | F  |   |               |   |        |          |                                  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | ┢  |   |               |   |        |          | ાર્થોસાફ<br>સિંફાફ               |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | ۲,   |   |               |   |        |          | મિકિકોફ<br>સિકિકોફ               |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | -4   |   |               |   |        |          | મિંદિયા ફિ<br>મિંદિયા ફિ         |                     |          |                         |                     |                 |                  | :             |  |
|                      |                                 |             |  |   |               |   |        |          | सि सि है।<br>सि सि है।           |                     |          |                         |                     |                 |                  |               |  |
| 3                    |                                 |             | ţ.   | 4.5-6.0′/   |               |   |        | SM-      | 8                                |                     |          |                         | $\vdash$            |                 |                  |               |  |
|                      |                                 |             | L  | Sand: Yellowish brown (                                   |               |   | - 1    | SW       |                                  |                     |          |                         |                     |                 | ,                |               |  |
|                      | 12                              |             | -6   | grained, little subround t<br>to 3/4", mostly 1/4", trace |               |   | up     |          |                                  |                     |          |                         |                     |                 |                  |               |  |
| 4                    | 12                              | 3344        | F  | loose, moist, no odor.                                    |               |   | [      | SM-      |                                  |                     | 5.34     |                         |                     |                 |                  |               |  |
| W                    |                                 |             | ⊦  | 6.0-8.0'<br>0-1.0' Sand: Yellowish br                     | own (10 V     | 'R 5/6) verv                            | fine   | SW       |                                  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | $\vdash$   | grained, little subround t                                | to subang     | ular gravel                             | up     |          |                                  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             | F  | to 3/4", mostly 1/4", trace loose, moist, no odor.        | to little sil | t, poorly so                            | rted,  |          |                                  |                     |          |                         |                     |                 |                  |               |  |
| 5                    | 19.2                            | 8777        | 8  | 8.0-10.0'   |               |   |        | SM-      |                                  |                     | 5.33     |                         |                     | -               |                  |               |  |
|                      |                                 |             | <u> </u>   | 0-1.6' Sand: Yellowish br                                 |               |   |        | SW       |                                  |                     | 5.55     |                         |                     |                 |                  |               |  |
|                      |                                 |             |  | grained, little subround to 3/4", mostly 1/4", trace      |               |   |        |          |                                  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             |  | loose, moist, no odor.                                    |               | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ,,,,,, |          |                                  |                     |          |                         |                     |                 |                  |               |  |
|                      |                                 |             |  |   |               |   |        |          |                                  |                     |          |                         |                     |                 |                  |               |  |
| 6                    | 18                              | 3457        | 10   | 10.0-12.0'/   | OLUE (103     | D E /6\                                 | 65.    | SM-      |                                  |                     | 6.12     |                         |                     |                 |                  |               |  |
| I hereb              | y certify                       | that th     | ı<br>e infor                                     | 0-1.5' Sand, yellowish bromation on this form is tru      |               |   |        |          | <u>raf- সাক্র</u>                | dge.                | <u> </u> |                         |                     | <u> </u>        |                  |               |  |
| Signatu              | e e                             |             | . 4  | ^ .   |               |   | ARC/   |          | forces                           | St., Sui            | 400      |                         |                     |                 |                  |               |  |
|                      |                                 | -           | - / `  |   |               |   | Milw   | auke     | e, WI (4                         | 31., 301<br>414) 27 | 6-774    | 2                       |                     |                 |                  |               |  |

| Boring N           | lumber                         | _SVE           | -6                     |  |           |                |                 |         |                         |                     | i               | Page _           | 2     | of <u>2</u>      |
|--------------------|--------------------------------|----------------|------------------------|--|-----------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sam                | ple                            |                |                        |  |           |                |                 |         |                         | Soil Pr             | operti          | es               |       |                  |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts    | Depth in Feet          | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS      | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                |                | -<br>-<br>-            | grained, little subround to subangular gravel up<br>to 1", trace to little silt, poorly sorted, loose, moist,<br>no odor.  |           |                |                 |         |                         |                     |                 |                  |       |                  |
| 6                  | 7.2                            | 20 33<br>18 19 | -<br>-<br>-            | 12-14'/ 0-0.6'Yellowish bronw (10 YR 5/6), very fine grained, little subround to subangular gravel up to 1", trace to little silt, poorly sorted, loose, moist, no odor, rock in shoe.   | SM-<br>SW |                |                 | 5.98    |                         |                     |                 |                  |       |                  |
| 7                  | NR                             | 8 12<br>12 12  | - 16                   | 14-16'/<br>No recovery.  |           |                |                 |         |                         |                     |                 |                  |       |                  |
| 8                  | 20.4                           | 20 14<br>16 17 | -<br>-<br>-<br>-       | 16-18'/ 0-1.7' Sand: Dark yellowish brown (10 YR 4/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1/2", poorly sorted cohesive, moist, no odor. | SM        |                |                 | 8.50    | 1                       |                     |                 |                  |       |                  |
| 9                  | 24                             | 6694           | - 20                   | 18-20'/ 0-2.0' Sand: Dark yellowish brown (10 YR 4/6), very fine grained, some silt, trace clay, trace sub- angular to subround gravel up to 1/2", poorly sorted cohesive, wet, no odor. | SM        |                |                 | 6.42    |                         |                     |                 |                  |       |                  |
|                    |                                |                | - 22<br>24<br>26<br>28 | EOB @ 20'  |           |                |                 |         |                         |                     |                 |                  |       |                  |

|                    |  |             | <u>F</u>                                | Route to: Watershed/Wastewater Remediation/Redevelopment                                   |              |           | ement [                      | ]               |           |                         |                     |                 |                  |       |                       |     |
|--------------------|--|-------------|---|--|--------------|-----------|------------------------------|-----------------|-----------|-------------------------|---------------------|-----------------|------------------|-------|-----------------------|-----|
|                    |  |             |   |  |              |           |                              |                 |           |                         |                     | ŗ               | age _            | 1     | of2                   | _   |
| Facility/F         |  |             | Kipp                                    | /WI001283.0001.00004   | Licer        | nse/Peri  | mit/Mon                      | itoring N       | lumber    |                         | В                   |                 | lumber           |       |                       | _   |
| Boring D           |  |             | <u> </u>                                | chief (first, last) and Firm   | Date         | Drilling  | ) Started                    |                 | Date E    | Orilling C              | omple               | ted             | Drilling         | Met   | hod                   | _   |
| First Nar          |  |             |   | Last Name Jones  |              | 02/2      | 5/12                         |                 | 0         | 2/25/                   | 12                  |                 |                  |       | w Stem                |     |
| Firm G<br>WI Uniqu |  |             |   | DNR Well ID No.   Well Name  | Fine         | l Canala  | Water Le                     | n ral           |           | e Elevati               |                     | _               |                  | ıgeı  | iameter               | _   |
| wioniq             | ue weii i                                | NO.         |   | Well Name  | FINA         | II Static | Fee                          | - 1             | Suriaci   | e cievatii              |                     | t MSL 8.25      |                  |       | inches                |     |
|                    |  |             | estimat                                 | ed: 🔲 ) or Boring Location 🔲   | 3            |           | -                            |                 | Local G   | rid Loca                | tion                |                 |                  |       |                       | _   |
| State Pla          |  |             |   | N,E S□/C□  | XI E         |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| NW<br>Facility II  |  | <u>SW</u>   |   | Section <u>5</u> ,T <u>7</u> N,R <u>10</u> unty Coun                                       | ty Code      |           | Civil Tow                    | n/City/o        | r Village |                         | et 🗆                | s _             |                  |       | Feet W                | _   |
| _                  | 2532                                     | n           |   | Dane   | 13           | ľ         | CIVII IOVV                   | Mad             |           | -                       |                     |                 |                  |       |                       |     |
| Samı               |  |             | <u> </u>                                | <u> </u>   |              | Γ'        |                              |                 |           |                         | Soil P              | rope            | ties             |       |                       | ٦   |
| er<br>'pe          | Length All.&<br>Recovered (in)           | Blow Counts | Depth in Feet                           | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit                        |              |           | ic                           | EI.             | ۵         | Compressive<br>Strength | ure<br>int          | ı               | כ                | )     | RQD/<br>Comments      |     |
| Number<br>and Type | Lengtl<br>Recov                          | Blow (      |   |  |              | USCS      | Graphic<br>Log               | Well<br>Diagram | PID/FID   | Comp<br>Streng          | Moisture<br>Content | Liquíd<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comn          |     |
| 1_                 |  |             | 0                                       | 0-0.5'/  |              | Asphalt   |                              |                 |           |                         |                     |                 |                  |       | 0-6'                  |     |
| 2                  | 753                                      |             |   | Asphalt with coarse gravel base.<br>0.5-5.5'/  |              | CL        | IAI IAI IA<br>IAI IAI IA     |                 |           |                         |                     |                 |                  |       | H <b>ydroe</b> xcavat | ted |
|                    |  |             | L                                       | Clay: Dark yellowish brown (10 YR 4/6)   | , some silt, |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       | trace very fine sand, trace to little orga   | nics (roots/ |           | IAI IAI IA<br>IAI IAI IA     |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | - 2                                     | sticks), medium plasticity, soft (HP = 1.5 gray and black mottling, moist, no odo          |              | 7         | RATE DATE OF                 |                 |           |                         |                     |                 |                  |       |                       |     |
|                    | gray and black mottling, moist, no odor. |             |   |  |              |           | lei lei le<br>lei lei le     |                 |           |                         |                     |                 |                  |       |                       |     |
| W                  |  |             | L                                       |  |              |           | ામ દેશ છે.<br>આ પણ દેશ       |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       |  |              |           | Dei Dei M                    |                 | -         |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       |  |              |           | मिन देश है।<br>जिस्ती के देश |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | -4                                      |  |              | 1         | lei lei le<br>lei lei le     |                 |           |                         |                     |                 |                  |       |                       |     |
| l N                |  |             | L                                       |  |              |           | lei lei le                   |                 |           |                         |                     |                 |                  |       |                       |     |
| L.V.               |  |             | L                                       |  |              |           | ]                            |                 |           |                         |                     |                 |                  |       |                       |     |
| 3                  |  |             | F                                       | 5.5-6.0′/  |              | SW        |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| - V                |  |             | <u> </u>                                | Sand: Yellowish brown (10 YR 5/6), very  |              |           |                              |                 |           |                         | '                   |                 |                  |       |                       |     |
|                    |  |             | -6                                      | grained, trace silt, little subround to sul<br>Igravel up to 1", mostly 1/4", poorly sorte |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| 4                  | 24                                       | 5555        | L                                       | moist, no odor.  |              | SW        |                              |                 | 4.09      |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       | 6.0-8.0'   |              |           |                              |                 | ]         |                         |                     |                 |                  |       |                       |     |
|                    |  |             | _                                       | 0-2.0' Sand: Yellowish brown (10 YR 5/6 grained, trace silt, little subround to sult       |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| n l                |  |             | L                                       | gravel up to 1", mostly 1/4", poorly sorte   |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | -8                                      | moist, no odor.  |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| 5                  | 21.6                                     | 6887        | L -                                     | 8.0-10.0'<br>0-1.8' Sand: Yellowish brown (10 YR 5/0                                       | 6) you 6     | SW        |                              |                 | 4.60      |                         |                     |                 |                  |       |                       |     |
|                    |  |             |   | grained, trace silt, little subround to su   |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       | gravel up to 1", mostly 1/4", poorly sort  |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | L                                       | moist, no odor.  |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
|                    |  |             | 10                                      |  |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| 6                  | 19.2                                     | 978         | <del>-</del> 10                         | 10.0-12.07   |              | SW        |                              |                 | 3.55      |                         |                     |                 |                  |       |                       |     |
| I hereby           | / certify                                | that th     | e info                                  | 0-1.3' Sand: Yellowish brown (10 YR 5/mation on this form is true and correct              |              |           | knowle                       | dae.            |           |                         | <u> </u>            |                 |                  |       |                       | _   |
| Signatur           |  |             |   |  |              |           |                              |                 |           |                         |                     |                 |                  |       |                       |     |
| -                  |  | کون         | ······································· |  |              |           | ferson<br>:e,WI (            |                 |           |                         |                     |                 |                  |       |                       |     |

| Boring N           | umber                           | SVE            | <u>-</u> 7                    | <del></del>   |           |                |                 |         |                         |                     | (               | Page _           | 2     | of | 2_       |
|--------------------|---------------------------------|----------------|-------------------------------|---|-----------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|----|----------|
| Sam                | ple                             |                |                               |   |           |                |                 |         |                         | Soil Pr             | operti          | es               |       |    |          |
| Number<br>and Type | Length All. &<br>Recovered (in) | Blow Counts    | Depth in Feet                 | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | uscs      | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limît | Plastic<br>Limit | P 200 | ì  | Comments |
| 2 6                | 74                              |                |                               | grained, trace silt, little subround to subangular  | SP        |                |                 |         |                         |                     |                 |                  | _     |    | <u> </u> |
|                    |                                 |                | -<br>-<br>-12                 | gravel up to 1", mostly 1/4", poorly sorted, loose,<br>moist, no odor.<br>1.3-1.5' Sand: Very pale brown (10 YR 7/4), fine<br>grained, well sorted, loose, moist, no odor.<br>1.5-1.6' Sand: Yellowish brown (10 YR 5/6), little to                         | SM-<br>SW |                |                 |         |                         |                     |                 |                  |       |    |          |
| 7                  | 1.2                             | 20 17<br>19 25 | -<br>-<br>-<br>-              | some silt, little subangular to subround gravel up to 1," mostly 1/4," slightly cohesive, poorly sorted, moist, no odor.  12-14'/ 0-0.1' Sand: Yellowish brown (10 YR 5/6), little to some silt, little subangular to subround gravel up-                   | ŠŴ        |                |                 |         |                         |                     |                 |                  |       |    |          |
| 8                  | 24                              | 7711<br>12     | - 16                          | to 1", mostly 1/4", slightly cohesive, poorly sorted, moist, no odor.  14-16"/ 0-2.0' Sand: Yellowish brown (10 YR 5/6), little to some silt, little subangular to subround gravel up to 1", mostly 1/4", slightly cohesive, poorly sorted, moist, no odor. | SM-<br>SW |                |                 | 6.16    |                         |                     |                 |                  |       |    |          |
| 9                  | 24                              | 8 11 14<br>16  |                               | 16-18 <sup>7</sup> /<br>0-2.0' Sand: Yellowish brown (10 YR 5/6), little to<br>some silt, little subangular to subround gravel up<br>to 1", mostly 1/4", slightly cohesive, poorly sorted,<br>moist, no odor.   | SM-<br>SW |                |                 | 8.05    |                         |                     |                 |                  |       |    |          |
| 10                 | 18                              | 19 23<br>25 18 | -                             | 18-20"/ 0-1.5" Sand: Yellowish brown (10 YR 5/6), little to some silt, little subangular to subround gravel up to 1", mostly 1/4", slightly cohesive, poorly sorted, moist, no odor.  | SM-<br>SW |                |                 | 7.03    |                         |                     |                 |                  |       | 11 |          |
| 11                 | 19.2                            | 6 9 15<br>18   | - 20<br>-<br>-<br>-<br>-<br>- | 20-22'/ 0-1.6' Sand: Yellowish brown (10 YR 5/6), little to some silt, little subangular to subround gravel up to 1", mostly 1/4", slightly cohesive, poorly sorted, wet, no odor.  | SM-<br>SW |                |                 | 7.60    | •                       |                     |                 |                  |       |    |          |
|                    |                                 |                | - 24<br>- 26<br>- 26          | EOB @ 22'   |           |                |                 |         |                         |                     |                 |                  |       |    |          |

|   |  | <u> </u>      | Route to: Watershed/Wastewater Remediation/Redevelopment               |             | Manag                                      | ement [                            | ]               |           |                         |                     |                 |                  |           |                  |
|---|--|---------------|--|-------------|--|------------------------------------|-----------------|-----------|-------------------------|---------------------|-----------------|------------------|-----------|------------------|
|   |  |               |  |             |  |                                    | ·               |           |                         |                     | F               | Page _           | 1         | of 2             |
| Facility/Project                                |  |               | ANIO01202 0001 00004   | Lice        | ense/Per                                   | mit/Mon                            | itoring N       | lumber    |                         | В                   | oring N         | lumbei           |           |                  |
|   |  |               | /WI001283.0001.00004<br>chief (first, last) and Firm                   | Date        | o Drillio                                  | g Started                          |                 | Date      | Orilling C              | omple               | tod I           | Drilling         | VE-8      |                  |
| First Name B                                    |  |               | Last Name Jones  | Date        |  |                                    |                 |           | -                       |                     | ieu             |                  |           | v Stem           |
|   |  |               | g & Associates, Inc.   |             | 02/25/12 02/25/12                          |                                    |                 |           |                         | 12                  |                 |                  | igei      |                  |
| WI Unique Well                                  |  |               | DNR Well ID No. Well Name  | Fin         | Final Static Water Level Surface Elevation |                                    |                 |           |                         |                     |                 | Boreh            | ole D     | iameter          |
|   |  |               |  |             |  | Fee                                | t               |           |                         |                     | t MSL           | <u>8.2</u>       | <u>25</u> | inches           |
| Local Grid Origin<br>State Plane                | n 🔲 (6                                   | estimat       | ed: ☐ ) or Boring Location ☐<br>N, E S ☐ /C ☐                          | J/N□i L     | Local Grid Location                        |                                    |                 |           |                         |                     | N               |                  |           | ΠE               |
|   |  |               | Section <u>5</u> ,T <u>7</u> N,R <u>10</u>                             | ₩ Lor       |  |                                    |                 |           | Fe                      | et 🗖                |                 |                  |           | Feet W           |
| Facility ID                                     | 100                                      |               |  | ity Code    |  | Civil Tow                          | n/City/o        | r Village |                         |                     | <del></del>     |                  |           |                  |
| 11312532  | 0  |               | Dane   | 13          | Madison                                    |                                    |                 |           |                         |                     |                 |                  |           |                  |
| Sample  |  |               |  |             |  |                                    |                 |           |                         | Soil P              | rope            | rties            |           |                  |
| (j. %   | ۱,,                                      | <br>  #       | Soil/Rock Description  |             |  |                                    |                 |           | é                       |                     |                 |                  |           |                  |
| 1   | Blow Counts                              | Depth in Feet | And Geologic Origin For  |             |  | l                                  | _               |           | essi <sup>r</sup><br>th | e +                 |                 |                  |           | RQD/<br>Comments |
| Number<br>and Type<br>Length All.,<br>Recovered | 🖔  | 훈             | Each Major Unit  |             | 1 23                                       | Graphic<br>Log                     | Well<br>Diagram | PID/FID   | npr                     | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | 200       | ) in 10          |
| Nur<br>and<br>Len<br>Rec                        | Blo                                      |               |  |             | USCS                                       | Gra                                | We              |           | Compressive<br>Strength | ₽Õ                  | Ŀ.E.            | Pla<br>Lin       | Р         | ତୁ ତି            |
| 1   |  | 0             | 0-0.5′/  |             | Asphali                                    | 1 1                                |                 |           |                         |                     |                 |                  |           | 0-6'             |
| 2 -   |  | L             | Asphalt with coarse gravel base.                                       |             | ]  CL                                      | IAI IAI IA<br>IAI IAI IA           |                 |           |                         |                     |                 |                  |           | Hydroexcavated   |
|   |  | Γ             | 0.5-5.0'/<br>Clay: Dark yellowish brown (10 YR 4/6)                    | ) como silt |  | LATE OF TA                         |                 |           |                         |                     |                 |                  |           |                  |
| 1   | <b>'</b>                                 |               | trace very fine sand, trace to little organ                            |             |  | IAI IAI IA<br>IAI IAI IA           |                 |           |                         |                     |                 |                  |           |                  |
|   |  | _             | sticks), medium plasticity, soft (HP = 1.                              |             |  | IAI IAI IA<br>IAI IAI IAI          |                 |           |                         |                     |                 |                  |           |                  |
| W   | gray and black mottling, moist, no odor. |               |  |             |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
| W I   | 1  | F             |  |             |  | ÎNTÎNÎ ÎN<br>ÎNTÎNÎ ÎN ÎN          |                 |           |                         |                     |                 |                  |           |                  |
| W 1   | 1  | F             |  |             |  | Jaj Jaj Ja                         |                 |           |                         |                     |                 |                  |           |                  |
|   |  | F             |  |             |  | TATE OF TA                         |                 |           |                         |                     |                 |                  |           |                  |
| W 1   |  | F             |  |             |  | ini in in                          | •               |           |                         |                     |                 |                  |           |                  |
|   |  | -4            |  |             |  | િક ફિલ્લોફ<br>ફિલ્લોફો<br>ફિલ્લોફો |                 | 1         |                         |                     |                 |                  |           |                  |
| 11  |  | L             |  |             |  | Jan Jan Ja                         |                 |           |                         |                     |                 |                  |           |                  |
|   |  | L             |  |             |  | ીકો ફેકા ફેક<br>ફેકા ફેકા ફેક      |                 |           |                         |                     |                 |                  |           |                  |
| 3   |  | ţ.            | 5.0-6.0′/  |             | SM   |                                    |                 |           |                         |                     |                 |                  |           |                  |
| W I   |  | L             | Sand: Yellowish brown (10 YR 5/6), ver                                 |             |  |                                    |                 | ŀ         |                         |                     |                 |                  |           |                  |
| <b>V</b>  |  | -6            | fine grained, mostly fine, little silt, trace                          |             |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
| 4 14.4  | 2435                                     | Ľ             | to subround gravel up to 3/4", mostly 1 poorly sorted, moist, no odor. | /8", loose, | SM   |                                    |                 | 10.19     |                         |                     |                 |                  |           |                  |
| i i   |  | Γ             | 6.0-8.0'   |             | 1  |                                    |                 |           |                         |                     |                 |                  |           |                  |
| W   |  | ┌             | Sand: Yellowish brown (10 YR 5/6), ver                                 | y fine to   |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
| la l  |  | ┝             | fine grained, mostly fine, little silt, trace                          |             | ar   |                                    |                 |           |                         |                     | İ               |                  |           |                  |
|   |  | F             | to subround gravel up to 3/4", mostly 1                                | /8", loose, |  |                                    | 1               |           |                         |                     |                 |                  |           |                  |
| 5 9.6   | 467                                      | -8            | poorly sorted, moist, no odor.<br>8.0-10.0'                            |             | SM   |                                    |                 |           |                         | _                   |                 |                  |           |                  |
| 9.0   | 467<br>11                                | F             | Sand: Yellowish brown (10 YR 5/6), ver                                 | y fine to   | 7141                                       |                                    |                 | 14.00     | Ì                       |                     |                 |                  |           |                  |
|   |  | F             | fine grained, mostly fine, little silt, trace                          | subangul    | aı   |                                    |                 |           |                         |                     |                 |                  |           |                  |
|   | /8", loose,                              |               |  | -           |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
|   |  | L             | poorly sorted, moist, no odor.   |             |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
|   |  | 10            |  |             | 1  |                                    |                 |           | <u> </u>                |                     |                 |                  | L         |                  |
| 6 NR  | 6810                                     | L'            | 10.0-12.0'/  |             |  |                                    |                 |           |                         |                     |                 |                  |           |                  |
| I hereby certify                                | 12<br>that th                            | e info        | No recovery.  mation on this form is true and correct                  | to the best | t of mv                                    | <u>l</u><br>knowle                 | dge.            | <u> </u>  | <u> </u>                |                     | L               |                  | L         | L <u></u>        |
| Signature                                       | , =                                      |               |  | Firm AR     | CADIS                                      |                                    |                 |           |                         |                     |                 |                  |           |                  |
|   | ici                                      | _ ,\$.        | ــــــــــــــــــــــــــــــــــــــ                                 |             |  | ferson<br>ee, Wi (                 |                 |           |                         |                     |                 |                  |           |                  |
| 2   |  |               |  | T 14111     | waunt                                      | CARI (                             | 717/2/          | 5774      | _                       |                     |                 |                  |           |                  |

| Boring N           | Number .                       | SVE            | -8                  |   |         |                |                 |         |                         |                     |                 | Page _           | 2     | of <u>2</u>      |
|--------------------|--------------------------------|----------------|---------------------|---|---------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|
| Sam                | ple                            |                |                     |   | 1       |                |                 |         |                         | Soil P              | operti          | es               |       |                  |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts    | Depth in Feet       | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | nscs    | Graphic<br>Log | Weli<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |
|                    |                                |                | -<br>-<br>-         |   |         |                |                 | :       |                         |                     |                 |                  |       |                  |
| 7                  | 9.6                            | 8897           | -                   | 12-14'/ Sand: Yellowish brown (10 YR 5/6), very fine to fine grained, mostly fine, little silt, trace subangula to subround gravel up to 3/4", mostly 1/8", loose, poorly sorted, moist, no odor.       | SM<br>r |                |                 | 12.40   |                         |                     |                 |                  |       |                  |
| 8                  | 20.4                           | 4412<br>8      | - 14<br>-<br>-<br>- | 14-16"/ Sand: Brownish yellow (10 YR 6/6), very fine grained, some silt, trace clay, trace subround to subangular gravel up to 1", mostly 1/8"-1/4", cohesive, moist, no odor.                          | SM      |                |                 | 6.81    |                         |                     |                 |                  |       |                  |
| 9                  | 24                             | 17 19<br>21 21 | - 16<br>-<br>-      | 16-18'/ Sand: Brownish yellow (10 YR 6/6), very fine grained, some silt, trace clay, trace subround to subangular gravel up to 1", mostly 1/8"-1/4", cohesive, moist, no odor.                          | SM      |                |                 | 7.47    |                         |                     |                 |                  |       |                  |
| 10                 | 19.2                           | 17 20<br>18 21 | 18<br>-<br>-<br>-   | 18-20'/ Sand: Brownish yellow (10 YR 6/6), very fine grained, some silt, trace clay, trace subround to subangular gravel up to 1", mostly 1/8"-1/4", cohesive, moist, no odor.                          | SM      |                |                 | 9.47    |                         |                     |                 |                  |       |                  |
| 11                 | 15.6                           | 8 27 25<br>18  | - 20<br>-<br>-<br>- | 20-22'/ Sand: Brownish yellow (10 YR 6/6), very fine grained, some silt, trace clay, trace subround to subangular gravel up to 1", mostly 1/8"-1/4", cohesive, wet seam from 0.6-0.8", moist, no odor.  | SM      |                |                 | 7.22    |                         | 7                   |                 |                  |       |                  |
| 12                 | 21.6                           | 32 50<br>45 30 | - 22<br>-<br>-<br>- | 22-24'/ 0-1.8' Sand: Brownish yellow (10 YR 6/6), very fine grained, some silt, trace clay, trace subround to subangular gravel up to 1", mostly 1/8"-1/4", cohesive, moist, no odor.                   | SM      |                |                 | 9.21    |                         |                     |                 |                  |       |                  |
| 13                 | 19.2                           | 8 21 50<br>43  | -                   | 24-26'/<br>0-1.6' Sand: Brownish yellow (10 YR 6/6), very fine<br>grained, some silt, trace clay, trace subround to<br>subangular gravel up to 1", mostly 1/8"-1/4",<br>cohesive, wet at 0.7", no odor. | SM      |                |                 | 10.42   |                         |                     |                 |                  |       |                  |
|                    |                                |                | - 28                | EOB @ 26'   |         |                |                 |         |                         |                     |                 |                  |       |                  |

|                    |   |                  | <u> </u>                                  | Route to: Watershed/Wastewater Remediation/Redevelopmen |                | te Manage<br>er 🔲 | ement [        | ]               |            |                         |              |                 |                  |        |                        |
|--------------------|---|------------------|---|---|----------------|-------------------|----------------|-----------------|------------|-------------------------|--------------|-----------------|------------------|--------|------------------------|
|                    |   |                  |   | ,   |                |                   |                |                 |            |                         |              |                 | age              | 1      | of <u>2</u>            |
| Facility/          | -   |                  | Kinn                                      | /WI001283.0001.00004                                    | Lic            | ense/Peri         | mit/Mon        | itoring N       | Number     |                         | В            |                 | umbei            |        |                        |
| Boring C           |   |                  |   | chief (first, last) and Firm                            | Da             | te Drilling       | Started        | ·               | Date I     | Orilling C              | omple        | ted             | Drilling         |        | _                      |
| First Na           | me Be   | eaufor           | ·d  | Last Name Jones   |                | 02/2              |                |                 | 0          | 2/25/                   | 12           |                 | Ho               | llo    | v Stem                 |
|                    |   |                  | ering                                     | g & Associates, Inc.                                    |                |                   |                |                 |            |                         |              |                 |                  | ıgeı   |                        |
| WI Uniq            | ue Well I   | No.              |   | DNR Well ID No. Well Name                               | Fi             | inal Static       |                |                 | Surfac     | e Elevati               |              |                 | Boreh            |        | iameter                |
| Local Gr           | id Origir   | П (              | estimat                                   | red: 🔲 ) or Boring Location 🔲 🔃                         |                |                   | Fee            | 39              | Local G    | rid Loca                |              | t MSL           | <u> 0.</u>       |        | inches                 |
| State Pl           | ane   |                  |   | _ N,E S□/C  |                | Lat               |                |                 |            |                         |              | N               |                  |        | E                      |
| <u>NW</u>          | 1/4 of  | SW               | 1/4 of                                    | Section <u>5</u> ,T <u>7</u> N,R <u>10</u>              |                | ng                |                |                 |            |                         | eet 🔲        | s _             |                  | Feet W |                        |
| Facility I         |   |                  |   | ,   | unty Code      | 19                | Civil Tow      | n/City/o        |            | 9                       |              |                 |                  |        |                        |
|                    | 12532   | 20               | . —                                       | Dane <u> </u>   | 13             | <del></del>       |                | IVIAU           | lison<br>T |                         | Soil E       | rope            | rtios            |        |                        |
| Sam                |   |                  |   |   |                |                   |                |                 | 1          |                         | 3011 F       | Topei           | ues              |        |                        |
|                    | (j.   | ıţs              | eet                                       | Soil/Rock Description                                   |                |                   |                |                 |            | š.                      |              |                 |                  |        | 2                      |
| p e                | h All<br>ered                                     | uno:             | <u>.</u> ⊑                                | And Geologic Origin For<br>Each Major Unit              |                |                   | .⊍             | ١               |            | ag eg                   | er E         | _               | ۔ ا              |        | nen                    |
| Number<br>and Type | Length Ail.&<br>Recovered (in)                    | Blow Counts      | Depth in Feet                             |   |                | USCS              | Graphic<br>Log | Well<br>Diagram | @FID       | Compressive<br>Strength | oist<br>Snte | Liquid<br>Limit | Plastic<br>Limit | 200    | RQD/<br>Comments       |
| Žā                 |   |                  | 0   | 0-0.5'/   |                |                   |                | ≥ □             |            | 2 %                     | Σŭ           |                 | ⊒ □              | Δ.     |                        |
| -                  |   |                  | Ļ   | Asphalt with coarse gravel base.                        |                | Asphalt           |                | }               |            | ļ                       | ļ            | <u> </u>        |                  |        | 0-6'<br>Hydroexcavated |
| 2                  |   |                  | -   | 0.5-5.0'/   |                | - SM              |                | ŀ               |            |                         |              |                 |                  |        |                        |
|                    |   |                  | L   | Clay: Dark yellowish brown (10 YR 4/                    | /6), some sil  | t,                |                |                 |            |                         |              |                 |                  |        |                        |
|                    |   |                  | trace very fine sand, trace to little org |   |                |                   |                |                 |            |                         |              |                 |                  |        |                        |
| (4)                | sticks), medium plasticity, soft (HP = 1.5-2), or |                  |   |   |                |                   |                |                 |            |                         | ĺ            |                 |                  |        |                        |
| 18                 | gray and black mottling, moist, no odor.          |                  |   |   |                |                   |                | 1               | -          |                         |              |                 |                  |        | ,                      |
| 10                 |   |                  | L   |   |                |                   |                |                 |            |                         |              |                 |                  |        |                        |
|                    |   |                  |   |   |                |                   |                |                 | İ          |                         |              |                 |                  |        |                        |
|                    |   |                  | Γ   |   |                |                   |                |                 |            |                         |              | 1               |                  |        |                        |
|                    |   |                  | Γ.  |   |                |                   |                |                 |            |                         |              | 1               |                  |        |                        |
|                    |   |                  | -4  |   |                |                   |                |                 |            |                         |              |                 |                  |        |                        |
|                    |   |                  | Γ .                                       |   |                |                   |                |                 |            |                         |              |                 |                  |        |                        |
| -                  |   |                  | -   |   |                | - C . A           |                |                 | <u> </u>   |                         | _            |                 |                  |        |                        |
| 3                  |   |                  | <b> </b>                                  | 5.0-6.0'/<br>Sand: Yellowish brown (10 YR 5/6), ve      | ery fine to    | SM                |                |                 | 1          |                         |              |                 |                  |        |                        |
|                    |   |                  | -   | fine grained, mostly fine, little silt, tra-            |                | ılar              |                |                 |            |                         |              |                 |                  |        |                        |
| 4                  | 14.4  | 2234             | -6  | to subround gravel up to 1", mostly 1,                  |                | SM                |                |                 | 6.61       |                         |              |                 |                  |        |                        |
|                    |   | 2237             | -   | loose, moist, no odor.                                  |                | 1 3141            |                |                 | 0.01       |                         |              |                 |                  |        |                        |
| 107                |   |                  | -   | 6.0-8.0'<br>0-1.2' Sand: Yellowish brown (10 YR 5       | 5/6) voru fir  |                   |                |                 |            |                         |              |                 | }                |        |                        |
| - 17               |   |                  | L   | to fine grained, mostly fine, little silt, 1            |                | 16                |                |                 | ĺ          |                         |              |                 |                  |        |                        |
| V                  |   |                  | -   | angular to subround gravel up to 1",                    |                | to                |                |                 |            |                         |              |                 |                  |        |                        |
| <u> </u>           |   |                  | -8  | 1/4", loose, moist, no odor.                            |                |                   |                | ļ               |            |                         |              |                 |                  |        |                        |
| 5                  | 12  | 3345             | L   | 8.0-10.0'<br>0-1.0' Sand: Yellowish brown (10 YR 5      | E/6) var. fr   | SM                |                | ]               | 8.90       | 1                       |              |                 |                  |        |                        |
|                    |   |                  | L   | to fine grained, mostly fine, little silt,              |                | 16                |                |                 | 1          |                         |              |                 |                  |        |                        |
|                    |   |                  |   | angular to subround gravel up to 1,                     |                | to                |                |                 |            |                         |              | ł               |                  |        |                        |
|                    |   |                  |   | 1/4", loose, moist, no odor.                            |                |                   |                |                 |            |                         |              |                 |                  |        |                        |
|                    |   |                  | Γ   |   |                | 1                 |                |                 |            |                         |              |                 |                  |        |                        |
| 6                  | 7.2   | 1145             | 10  | 10.0-12.0′/   |                | SM                |                | 1               | 9.46       |                         |              |                 |                  |        |                        |
| Lhoral             |   | that el          | o infe                                    | 0-0.6' Sand: Yellowish brown (10 YR:                    | 5/6), very fir | ne                | Make           | dae             | 1          |                         |              |                 | <u> </u>         | L .    |                        |
| Signatu            |   | ri <u>iat th</u> | e mio                                     | i madon ou triis form is true and correc                |                | RCADIS            | KIIOWIE        | uye.            |            |                         |              |                 |                  |        |                        |
| _                  |   |                  | _ 0                                       |   | 1 12           | 26 N. Jef         | ferson         | St., Sui        | te 400     | )                       |              |                 |                  |        |                        |
|                    |   | تب               |   |   | I iVI          | ilwauke           | :e, vvi (      | 414) 2.         | /0-//4     | 14                      |              |                 |                  |        |                        |

Boring Number SVE-9

Page <u>2</u> of 2

| ſ | Sam                | ple                            |                          |                          |  |      |                |                 |         |                         | Soil Pr             | opertie         | 25               |       |                  | ı |
|---|--------------------|--------------------------------|--------------------------|--------------------------|--|------|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|---|
|   | Number<br>and Type | Length All.&<br>Recovered (in) | Blow Counts              | Depth in Feet            | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 | RQD/<br>Comments |   |
|   | 7                  | 19.2                           | 4568                     | -<br>-<br>12             | 12-14'/  | SM   |                |                 | 11.76   |                         |                     |                 |                  |       |                  |   |
|   |                    |                                |                          | -<br>-<br>-              | 0-1.6' Sand: Yellowish brown (10 YR 5/6), very fine to fine grained, mostly fine, little silt, trace subangular to subround gravel up to 1", mostly 1/8 to 1/4", loose, moist, no odor.      |      |                |                 |         |                         |                     | :               |                  |       |                  |   |
|   | 8                  | 18                             | 15 8 8<br>5              | -<br>-<br>-              | 14-16'/ 0-1.5' Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1", mostly 1/2", cohesive, moist, no odor.             | SM   |                |                 | 13.80   |                         |                     |                 |                  |       |                  |   |
|   | 9                  | 20.4                           | 9 12 11<br>13            | -                        | 16-18"/ 0-1.7' Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1", mostly 1/2", cohesive, moist, no odor.             | SM   |                |                 | 18.55   |                         |                     |                 |                  |       |                  |   |
|   | 10                 | 20.4                           | 9819<br>11               | - 18<br>-<br>-<br>-      | 18-20'/<br>0-1.7' Sand: Yellowish brown (10 YR 5/6), very fine<br>grained, some silt, trace clay, trace subangular to<br>subround gravel up to 1", mostly 1/2", cohesive,<br>moist, no odor. | SM   |                |                 | 16.70   |                         |                     |                 |                  |       |                  |   |
|   | 11                 | 15.6                           | 539<br>12                | - 20<br>-<br>-<br>-<br>- | 20-22'/ 0-1.3' Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1", mostly 1/2", cohesive, moist, no odor.             | SM   |                |                 | 17.09   |                         |                     |                 |                  |       |                  |   |
|   | 12                 | 24                             | 30 60<br>32 50<br>for 5" | - 22<br>-<br>-<br>-      | 22-24'/ 0-2.0' Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1", mostly 1/2", cohesive, moist, no odor.             | SM   |                |                 | 18.33   |                         |                     |                 |                  |       |                  |   |
|   | 13                 | 14.4                           | 26 37<br>50 for<br>4"    | - 24<br>-                | 24-26'/ 0-1.2' Sand: Yellowish brown (10 YR 5/6), very fine grained, some silt, trace clay, trace subangular to subround gravel up to 1", mostly 1/2", cohesive, wet, no odor.               | SM   |                |                 | 24.68   |                         |                     |                 |                  |       |                  |   |
|   | - 1                |                                |                          | - 26<br>-                | EOB @ 26'  |      | <u> </u>       |                 |         |                         |                     |                 |                  |       |                  |   |
|   |                    |                                |                          | - 28<br>-                |  |      |                |                 |         |                         |                     |                 |                  |       |                  |   |

|                    |                                |             | <u>!</u>      | Route to: Watershed/Wastewate<br>Remediation/Redevelo |                |       |          | ement [        |                 |         |                         |                     |                |                  |             |                   |
|--------------------|--------------------------------|-------------|---------------|---|----------------|-------|----------|----------------|-----------------|---------|-------------------------|---------------------|----------------|------------------|-------------|-------------------|
|                    |                                |             |               |   |                |       |          |                |                 |         |                         |                     | F              | Page _           | 1_          | _ of1_            |
| Facility/Pro       |                                |             | //001         | 269 0011 00001  |                | Licen | se/Per   | mit/Mon        | itoring N       | lumber  |                         | В                   | oring N        | lumbei           |             | 1                 |
|                    |                                |             |               | 368.0011.00001<br>chief (first, last) and Firm        |                | Date  | Drilling | g Started      |                 | Date [  | Orilling C              | Comple              | ted            | Drilling         | WE<br>a Met |                   |
| First Nam          | e To                           | dd          |               | Last Name Schmalfeld                                  | lt             | 1     | 2/05     |                |                 |         | 12/08,                  |                     |                | •                |             | Rotary            |
| Firm Ca            | scac                           | le Dril     | lling         | DNR Well ID No. Well Nan                              | 20             | Fina  | I C+-+:- | Water Le       |                 | C       | - El+:                  |                     | _              |                  |             |                   |
|                    | /N14                           |             |               | Well Nati   | SWE-1          | Fina  | i Static | water Le       |                 | Surfac  | e Elevati               |                     | t MSL          | Boren            |             | iameter<br>inches |
| Local Grid         | Origin                         | □ (i        | estimat       | ted: ( ) or Boring Location ( E S                     | □/C□/N□        | l La  | +        |                |                 | Local G | irid Loca               |                     |                |                  |             |                   |
|                    |                                |             |               | f Section,TN,R  |                | Long  |          |                |                 |         | Fa                      | eet $\square$       |                |                  |             | ☐ E<br>Feet ☐ W   |
| Facility ID        | /4 of _                        |             |               | ounty   | County Cod     |       |          | Civil Tow      | rr(/City)o      |         |                         | .e. <u> </u>        | <u> </u>       |                  |             | reet 🗀 W          |
| 113                | 1253                           | 20          |               | Dane  | 13             |       |          |                | Mad             | ison    |                         |                     |                |                  |             |                   |
| Sampl              |                                |             |               |   |                |       |          |                |                 |         |                         | Soil F              | ropei          | rties            | $\square$   |                   |
|                    | l.&                            | nts         | -eet          | Soil/Rock Descripti<br>And Geologic Origi             |                |       |          |                |                 |         | sive                    |                     |                |                  |             | ıts               |
| ber<br>Type        | th Al<br>verec                 | Blow Counts | Depth in Feet | Each Major Unit                                       | III FOI        |       |          | hic            | ram             | ₽       | pres                    | ture                | <del>م</del>   | i<br>L ic        | 0           | /<br>men          |
| Number<br>and Type | Length All.&<br>Recovered (in) | Blow        | Dept          |   |                |       | USCS     | Graphic<br>Log | Well<br>Diagram | PID/FID | Compressive<br>Strength | Moisture<br>Content | Liqui<br>Limit | Plastic<br>Limit | P 200       | RQD/<br>Comments  |
| 1                  |                                |             | 0             | 0-19'/  |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             |               | 0-19.0' Overburden (blind drill).                     |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | L             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
| 2                  |                                |             | 19            | 19-34'/   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             | 19.0-34.0' Weathered Bedrock (k                       | olind drill).  |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             |               |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | -<br>- 34     |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
| 3                  |                                |             |               | 34-186.2′/  | 4.1. 1.1.115   |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | L             | 34.0-186.2' Competent Bedrock                         | (blind drill). |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
| -                  |                                |             | 186.2         | 2   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | <u> </u>      |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             |               |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             |               |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | L             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | L             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | L             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | F             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             | -             |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
|                    |                                |             |               |   |                |       |          |                |                 |         |                         |                     |                |                  |             |                   |
| I hereby           | certify                        | that th     | e info        | rmation on this form is true and o                    | correct to the | hest  | of my    | knowle         | dae             |         |                         |                     |                |                  |             |                   |
| Signature          | i                              | chac di     | //            | /   | Firm           | ARC   | ADIS     |                |                 | 400     |                         |                     |                |                  |             |                   |
|                    | /                              | - 1         | NI            | / (   | 1              | 126   | ıv.Jef   | ierson         | St., Suit       | .e 400  |                         |                     |                |                  |             |                   |